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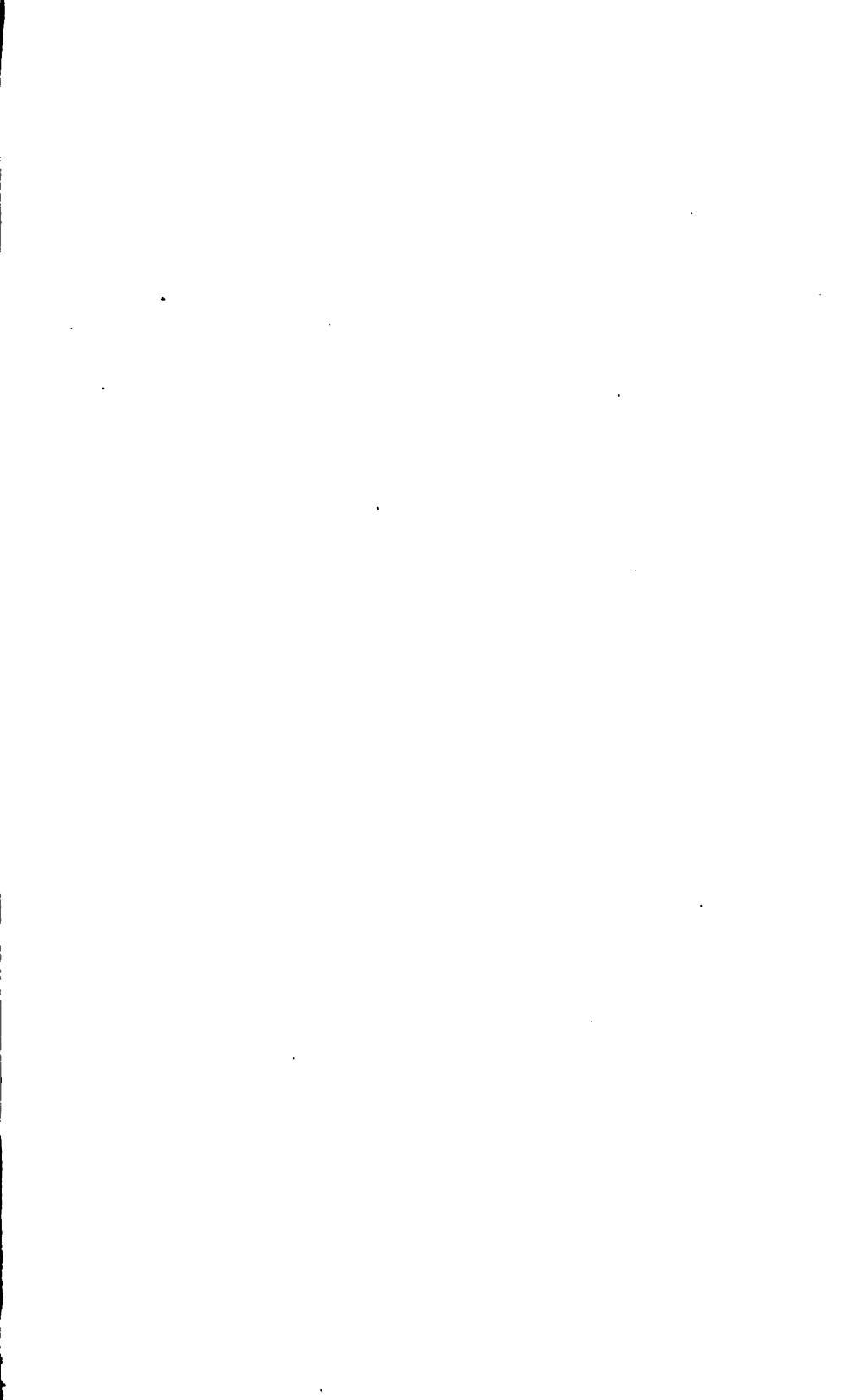
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THE

American Educational Monthly

A MAGAZINE OF

Popular Instruction and Literature.

VOLUME IX.—1872.

NEW YORK:

J. W. Schermerhorn & Co.

1872.

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AMERICAN EDUCATIONAL MONTHLY.

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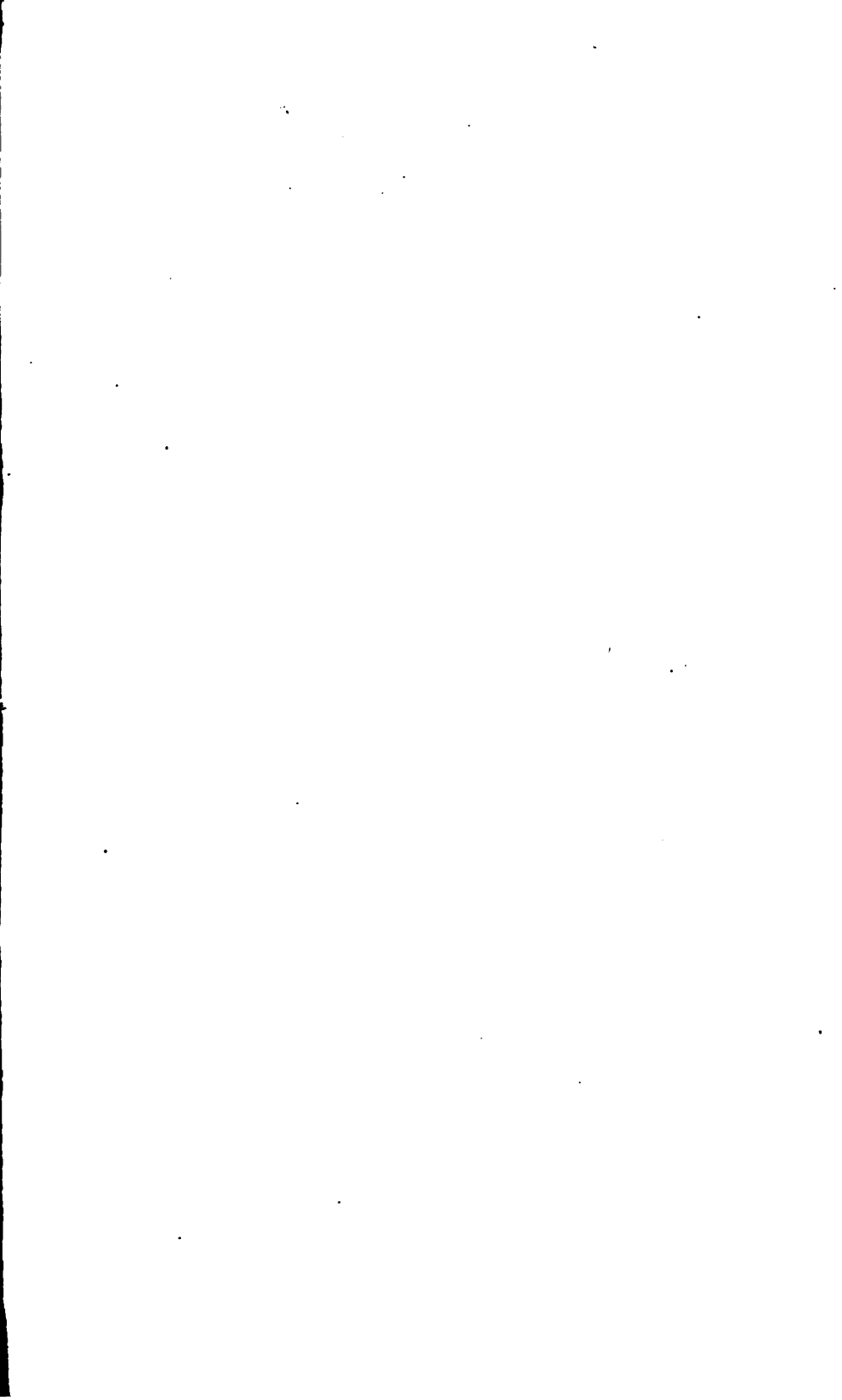
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AMERICAN EDUCATIONAL MONTHLY.

JANUARY, '1872.

THE SCHOOLMASTER AND HIS PUPIL.

"BOTH PUZZLED."

WHO of us has not seen and known this schoolmaster of the olden time, here so faithfully pictured by the artist?—schoolmaster not teacher, for we will call him by his right name. Who of us hasn't felt him, and what boy of us all, smarting from his tongue or his rod, hasn't secretly meditated vengeance when we should grow big enough to inflict it upon him? But the promised *dies irae* somehow never came; our anger cooled as the blistered hand forgot its smart, or the red streak across the back faded to flesh-color again.

An acquaintance with his successors, and a wider experience of the world, taught us that he was not in temper a sinner above all other sinners, and we came, in time, to know that pupil and teacher *must* see things differently, looking at them from different points and with eyes at opposite ends of the glass. At all events, we found that it wasn't customary, gentlemanly, or Christian, to mete out such retribution for wrongs fancied or real, and we never did.

But now, for a moment, look at the master in the picture. Begin with his eyes; they are the eyes of a mask, they open into the vacuity behind them. Cut off from them the rest

of the face, as Vinnie Ream hides features in the photographs she moulds from, and you might easily suppose you were looking into the muzzles of a double-barrelled fowling-piece.

Nothing is in them, and you see it. And that face as a whole—it is as expressionless of thought as is a sirloin of beef; you could almost imagine the lines upon it to have been made by the knife of the carver. One could fashion of wood and upon the lathe, a more expressive countenance. Let your eye light upon it from above; it looks as you could believe a clearing in the edge of a swamp would look to a hawk flying over it. Woods behind it, woods skirting its sides and its edges.

But he is the schoolmaster, he must *seem* intelligent if he isn't; and in the ratio that he isn't so the hair is brushed up in a heap to show all the forehead there is, while he scorns the aid of his spectacles, and looks clean over them and as far as he can, into that nebula before him.

"Both puzzled." I should think so. The boy is, knows it, and shows it. The master is as much, and knows it as well, but does he look so? He can't untie the knot, and straighten out the tangle, of course not, but if he hasn't any knowledge, he has learned a kind of wisdom that serves him, instead. To show his ignorance would seem little short of a national calamity, he thinks, and so "You can take that as a part of your next lesson, sir, for our time is up." The boy isn't anxious to taste to-morrow of what burnt his mouth the day before; he doesn't renew the question, you may be certain, and the teacher when to-morrow comes, has drawn his slow train by that station entirely forgetting to stop there.

There is nothing *inviting* in that face or figure, is there? Nothing that stimulates the little fellow's thought and unlocks his tongue. Nothing warming, save that little something dangling from the right hand. The urchin must feel in his presence as a thermometer, in close neighborhood to an iceberg. His faculties coil up, shrink in upon themselves, grow numb. Thoughts and things run speedily down towards zero. No wonder the question asked is of "naught;" naught else seems so appropriate, seems possible, even. Is it a fancy of mine, or is it a sly touch of the artist, a delicate stroke of his genius, that this is the question raised? Nothing inviting!

Even the coat is buttoned to the chin. What pupil ever worked his way through the thick, tough integuments, and reached the heart of the master, beneath? And that lip thrust out toward the boy. I can see other things in it, but this to me is plainest—some measure of contempt for the lad before him. Delsarte himself might have helped the painter to that feature.

The only thing in the figure that indicates openness, that wins the slightest confidence toward him, is the extended left arm and leg. To sit with both legs under him and both arms about him, would betray too much poise, alertness, too much of the watch-dog. That is the position one assumes when he has gathered himself, and sits coiled, ready for a spring. There is offence and defence in it, and nothing else. In a schoolmaster, even in this one, that would be too repellent. But he runs no risk in his present attitude, his reputation is such that he can afford this slight concession to human nature, to boy nature, and he makes it. Especially when he has in that right hand of his so cogent an argument, "the last argument to which kings resort," be those kings monarchs of realms or of school-rooms. The last argument, did I say? The last now, let us hope, but if my memory be not at fault, it was once occasionally the first, sometimes, the only.

But there is before us another figure than that of the schoolmaster, and herein lies the pathos of the picture—the little fellow in front whose face is as blank as his slate, but whose whole attitude is a mute appeal to our sympathy, and should have been to his tormenter's. We instinctively take sides with him and against you, you stony old Rhadamanthus. A word in your ear, sir; you will please not use upon our client, that scourge of small cords—at least not while we are around. It might lead to an unpleasantness—a "scene," they sometimes call it. We should dislike to show our disrespect for authority of any kind, even for yours. And as a certain Judge said of a certain Mayor not far away, we honor the office if not the man that holds it. A "stupid" is he? you're another. And so there's a pair of you. But how could he be otherwise, pray tell us? Things don't sprout in the winter. How could his ideas break through such a

crust as you have frozen over them, and grow in such an atmosphere? I don't care if a string does hang in loops from his pocket, and his pants are rolled up, and his head is frowzy. There's anxiety as well as ignorance, in his face, and a pleading in his eyes. Don't you see it? he's in trouble and it's an honest trouble. His question is a fair one, there's a point to it. It is even ingenious, but there's no trap in it, to catch you. We must have been thinking, turning over and again that problem in multiplication, or he wouldn't have found this difficulty. Help tide him over the sand bar on which he has struck. You can't? Then quit shamming, you old hypocrite! Get down from the throne where you have lorded it so long, abdicate your crown, break in two your wand of office, seize your hat and rush out of the village, anywhither, so you get beyond the limits of the district and of the profession you have so long disgraced. Buy a spade and go ditch for a living, or sue for a brakeman's place on a freight train. Hasten away, you old humbug, hasten! everybody, even the boys, now detect your ears under the lion's skin, and if you do not add wings to your speed, not staying even for the wages you never earned, I fear you may fare in the end, as did your great prototype in the fable.

Of course, dear friends, this is a picture of the old-time schoolmaster—like Goldsmith's in the "Deserted Village," it is all of the past. No one of us, or of our acquaintance, sat for this portrait, not we. "Let the galled jade wince, our withers are unwrung," we can all say, and our pupils can echo it for us. Are we quite certain of this? Fy, what a question! "To be sure" we are, there isn't a feature of it that we recognize in ourselves or in our fellows of the craft.

Who dares to say of us, that we don't carry about with us certificates of soundness and safety from the proper inspectors, with full permits to ply upon certain waters? that we are ever caught napping at our posts? that when asked we haven't reasons to give as plenty as blackberries? that we ever darken counsel by words without knowledge, like a certain fish, inking the waters to conceal what we would hide? that we ever have a sinister reason for telling the scholars, one after another floored by an athletic difficulty, that it will

do them good to wrestle with it till the next day? that we don't always come fresh to our recitations, fairly redolent of works consulted? that our knowledge doesn't, with much of a margin, overlap in all directions, that of our classes? that, in a word, we are not making authorities of ourselves in certain specialties, and rounding ourselves out, as best we can, in the whole circle of studies, making ourselves, as Charles Lamb phrases it, at least "superficially omniscient?"

And who is there so ignorant of us as to hint that we are careless of the precious material upon which we are daily working? that we haven't won the confidence of our pupils and they, ours? that we drive, but do not lead? that their hearts are not in their daily work nor, in ours, so that nothing in the school-room seems trivial to them or to us? that we fail to convince them that their interests or ours are identical? that we do not make learning attractive to them, neutralizing for them the pain it costs them, by the pleasure we show them it yields, and that we do not stretch our minds upon theirs, kindling into enthusiastic glow the life smouldering in them, breathing so much of ourselves into them as is needful for this, willing to spend and be spent if so be that we may inspire in them a quenchless desire to know and to be?

Who? No one, of course, no one. It is all in my imagination—it is a jest, if it please you, a joke.

IN the manufacture of refracting telescopes the English now stand at the head. Mr. A. Clark's twenty-inch object glass, mounted in the Chicago Observatory, has been the marvel of the world. This observatory and those at Cambridge, Mass., and Pulkowa, Russia, have stood foremost. Within the past year a twenty-five inch object-glass has been mounted by the Messrs. Cook, of York, Eng., and much is expected of it, though it will be necessary to take it out of England to give its power fair scope. With every increase of magnifying power it becomes essential to secure a greater purity of the atmosphere.

HINTS ON DISCIPLINE AND SCHOOL EDUCATION.

MOTHERS THE FIRST TEACHERS.

DURING the days of infancy the mother, by her "teachings and influence," instils into the heart of the child the germs of those characteristics which, in time to come, will distinguish him from all the world beside; or rather, she incites and nurtures those embryo qualities and feelings which already exist in a latent or dormant state. In after years it is the teacher's peculiar province to invigorate those characteristics, and so develop the mental, moral and physical powers, as to fix indelibly the noble impressions first made by the dearest and kindest of earthly friends. It is from mothers alone that children will "learn as if by instinct." In early childhood they are therefore the best of all teachers; but as time rolls on and the child merges into the boy, the nature of our institutions, in conjunction with domestic or public duties, compels the parent to delegate her powers, duties, and privileges to another. That other is the teacher—tutor or preceptor—the *locum tenens* of the parent in all scholastic or educational matters.

THE PARENTAL SUBSTITUTE.

The teacher may be regarded, for the time being, as the common parent of all the children under his charge, and is justified in treating them in every respect as if they were really his own. The teacher's responsibility is, however, much greater than that of any individual parent, inasmuch as his "collective family" is much larger than that of any "home circle." There is scarcely a domestic circle in the land in which the "head of the house" (notwithstanding his moral influence and other parental advantages,) has not more than once deemed it his duty to inflict corporal punishment on some member of his family. This he did with the view of reforming the "little culprit," and also for the sake of example; hoping thereby to deter his other children from committing similar offences. For reasons identical with these the teacher uses similar means to produce like

results. The abolition or continuance of corporal punishment in our schools is a subject which has been discussed with much interest throughout the length and breadth of the land; and, strange to say, it is a question on which the greatest teachers and most learned men of the age have taken opposite views. Some of the States—New Jersey for instance—passed laws prohibiting corporal punishment in the public schools; but ere many months elapsed the respective legislatures had to repeal these enactments, the “moral suasion system” not having been successful in winning “little offenders” to a right sense of duty. Events proved that a middle course was best—that corporal punishment should not be abolished, but that it should be resorted to as seldom as possible; only when all other legitimate means of reformation had been tried and found to fail. Efficient school government is not a tyranny. It is an arrangement for the public good, placing the teacher in the position of parent, to each and all under his tuition—to children not his own. This arrangement tends to promote the welfare of the governor and the governed, and is made by the parents and guardians of the pupils for their good—not for the teacher’s special convenience.

IMPARTIALITY.

The teacher’s government, patriarchal in essence, should be equal in application and impartial in every respect. Big and little, rich and poor, male and female, should be equal in his sight. He should never punish one child for faults tolerated in another—never “wink” at the offences of the larger pupils whilst he notes the “shortcomings” of the younger. Nothing could be so subversive of good or efficient government. He should have no preferences, no favorites. His rule should be the personification of equality and uniformity. The neglected child of poverty should be as dear to him as the son of opulence and ease. The teacher has to deal with the interior—with the heart and mind—not with the exterior. The dress or address, the manners or family connections of the more fortunate pupils should never influence him to favor them above their companions of an humbler sphere, who may happen to be more bashful and

less forward. His tone should be as kind and his manner as cordial toward the one as the other. He should endeavor to attract all and repel none—to succeed he must have no prejudices and make no exceptions. The sun of his love must shine equally on all. Indeed it has been well said that “children often need sympathy more than government,” and that “encouragement is a more powerful agent than censure.”

FIRST IMPRESSIONS.

With children (as with full grown people) attachment always follows respect—esteem always precedes affection and love. To gain this esteem, attachment and love, the teacher must be gentle, affable, and courteous,—a gentleman in every sense of the word—and in addition, must take a deep interest in the welfare of his pupils—sharing their joys and sympathizing with them in their little sorrows. His future success depends, in a great measure, on the first impressions produced by him after entering on the discharge of his duties. For this reason, if for no other, he should commence as he would continue, and *vice versa*. When pupils discover that a teacher entertains doubts of his own ability, and that he is deficient in confidence or self-reliance, they consider him as half conquered, and are sure to put his misgivings to the test, and to “complete the conquest,” should his skill and fortitude fall short of the occasion.

DECISION AND FIRMNESS.

Every teacher, whether public or private, should be possessed (or endeavor to possess and improve) the faculties of decision and firmness, so that he may determine quickly and act promptly in accordance with his sense of duty. Decision of character is the first element of success in the practice of the educational profession; and, as “a courageous heart and resolute mind are omnipotent,” there should be no hesitation apparent in the teacher’s manner—no vacillation visible in his conduct. When he decides he should be sure to decide justly. When he issues orders he should compel obedience. He should always *mean what he says, and say what he means*. “Unless in case of error,” as Locke

affirms, "his words should be irrevocable." Then will his pupils confide in his justice, and, as Milton well observes: "None will question the equity of his decisions." He should do all things as he thinks best—best for his pupils—best for himself—best for the public. Possessing these qualifications, loving what is right, revering justice, acting in accordance with religious and patriotic principles, and with the God-like desire to do good, failure is impossible—success is certain. Such a party will be a good, if not a great teacher.

NOT WISE TO EXHIBIT SUSPICION.

The teacher should be particularly careful not to exhibit distrust, or appear to entertain suspicions of his pupils in any case, individually or collectively. Such "weakness" on his part would not only decrease their respect for himself personally, but would actually tend to make them what he desires them not to be. If he have good reasons to believe or suspect that a boy is vicious, or idle, and inclined to be troublesome, he may possibly, with a little tact and judgment, reform him by adopting an opposite course. The "delinquent" in such cases is often won from his evil ways by the teacher apparently placing unlimited confidence in him, by appointing him to some responsible position in the school *pro tem.*, and by occasionally requesting his assistance in teaching or in some other capacity. The judicious use of this *ruse* will be almost sure to transform the "backslider" into a good, industrious, trustworthy boy.

TO LOOK ON BOTH SIDES OF A PUPIL'S CHARACTER.

If a pupil be wild, idle, troublesome, or disposed to evil ways, it is not wise or even prudent for the teacher to look altogether on the dark side of his character. He should be made to understand that the teacher's gaze is fixed on the bright side also—that his good qualities have been noted as well as his bad ones, and that no matter how reprehensible his acts, still it is believed his intentions may have been good. In other words, while censuring his conduct it is wise to give him credit for many praiseworthy intentions. This course being nearer to nature than the former will be more correct, because it will present to the pupil a stronger and

more perfect likeness of himself; and, as time rolls away, the probabilities are that he will gradually become conscious of his errors and at last be induced to abandon or avoid them. The teacher, however, cannot be too careful in bestowing his commendations. Always strictly just and honest? he will not, of course, offer them unless they have been merited. Boys, like older folks, can distinguish between praise and flattery—they will not fail to look upon the one as honest payment of a just debt, and upon the other as a sinister present. “Verbal bribes,” like bribes in general, are certain signs of weakness, and he who offers them deserves nothing but scorn and contempt. Pupils should be encouraged, not flattered. When they act so as to deserve approbation they should receive their meed of praise. He who always scolds and never recognizes, or is never satisfied with a child’s efforts, is sure to break his spirit and destroy in him every desire to please; since all his deeds—good or bad—meet with the same reception. If a pupil has done his best he can do no more. He then merits commendation, not censure. The teacher should be careful to discriminate between indolence and want of ability—between faults arising from an evil disposition and those which may be ascribed to an error of judgment.

INNOCENT UNTIL PROVED GUILTY.

The teacher should be particularly careful not to believe a pupil guilty of an offence until the charge is clearly proved by reliable evidence. “Innocent until proved guilty” should be the motto of the school as well as of the hall of justice. The reputation of a child, sacred as that of an adult, should be treated as delicately as possible. These rules, tempered by kindly feeling, will tend to show that the teacher entertains a high regard for his pupils, and that he considers them honorable and trustworthy. His esteem and good opinion will have no small effect in making them what all would wish them to be—a credit to themselves and to their friends.

MUSIC IN SCHOOLS.

Most of the insubordination, disorder, and negligence occasionally visible in some schools may be traced to the

monotonous character of the programme, to lack of interest in the respective studies, and to prolonged restraint without sufficient time being allotted at intermissions for the escape of "the pent up animal spirits." For this reason "the intermissions" should be sufficiently long and sufficiently numerous; and it would be advisable to occasionally introduce a little variety into the regular daily or weekly routine of work. This may be accomplished by means of recitations, "special readings," "musical entertainments," etc. Such variations will be valuable aids in promoting discipline, and without their assistance the most experienced teacher will often find it difficult to excite and maintain sufficient interest in the respective exercises, or to wake up mind in the fullest and truest sense of the word. Such variations act as a "safety valve" in one sense, and as a "fly-wheel" in another. They will seldom fail to interest even the most indolent, and will so engross the attention of the more unruly as to prevent them being troublesome. Such exercises, like David's harp, never fail to expel the spirit of discord; and, in addition, they tend to elevate the mind, cultivate the taste, soothe the passions and supply a plenitude of harmless recreation. Now, thanks to the enlightened spirit of the age, musical instruments are considered indispensable necessities in every respectable school—and every school should be respectable. In such schools the pupils preside at the piano, in turn, and play voluntaries whilst the classes are marching to or from the class-rooms, and, on ordinary occasions, many of them remain in to practice during the intermissions. The occasional variation of the programme, so as to allow these exercises a more prominent place, will not only elevate the affections and create a love for the school and its officers, but likewise help in the education of citizens and patriots fully equal to the worthies of ancient Greece and Rome.

G. V. LE VAUX.

As artists and sculptors aim at the highest perfection in their work, so he that deals with the human mind should have the inspiration of the highest ideal.

THE PEDAGOGUE IN LITERATURE.

"Ut pueris olim dant crustula blandi,
Doctores elementa velint ut discere primo."—HORACE.

As good-natured schoolmasters sometimes give bon-bons to their boys that they may be willing to learn the first elements.

WHAT a *rara avis* a schoolmaster of the class which Horace describes must have been! If not duly appreciated by his boys, he should at least have been a favorite of the confectioners of that day, especially if he were very liberal in dispensing his bon-bons. It would be difficult, Horace notwithstanding, to convince the boys of a generation ago that something else was not dispensed besides bon-bons; and that the arduous thorny paths of learning were made so flowery and enticing, and that tardy strugglers were not impelled by other means to drink the Pierian spring or climb Parnassus' heights. No, no, we can hardly believe one of these "good-natured" schoolmasters a representative of the craft in those times; he must have been an exceptional type, delicately sensitive to and keenly sympathizing with the woes and bewilderment of school-boys; or, perhaps, he had at one time waged fierce warfare with the subjects of his scholastic realm, and having got the worst of the battle, was compelled to pay a sort of tribute for a suspension of hostilities.

His own schoolmaster could not have been of the class alluded to in this passage; for we have Orbilius Pupillus made infamous to all time by the *stinging* remembrance Horace had of him as a teacher; and he alludes to him on account of his flogging propensities by the title of *plagosum* (fond of flogging) in his Epistle to Augustus.

We have in this wonderful age of metamorphosis and progress changed a good deal, and the pedagogical type has no less escaped the transforming influence of the age; so whatever characteristic delineation we give, must be drawn in a great degree from the traditionary accounts handed down by previous generations, when pedagogues were installed to rule in dominant dignity and undisputed sway in their learned domain, with something like the Divine right of

kings, and when there was no possibility of relinquishing their high office for mere showy worldly allurements. The supporters of Darwin's theories may here find another example of "The Transformation of Species;" and the youth of a succeeding age, when the terrible despot of the ferule, with all his awful surroundings, is put before them, may look with something of the same awe and incredulity as we ourselves do when those terrible reptiles and ferocious monsters of former geological periods are placed before us in their repulsive outlines. Still there are certain traits, or as the French would say, *habitudes* of the type that cannot wholly be eradicated; indeed they must, in spite of individual temperament and circumstances, cling to it, as they constitute its very *raison d'être*, and are inseparable from any lengthened discharge of its functions.

Mankind, justly or unjustly, have pretty generally agreed on attributing certain superficial foibles to the pedagogical class as invariably associated with it, and infallibly distinguishing it from every other. It has been plausibly insinuated in defence of a useful but much maligned class, that there is here a little gratuitous spite; and that in this manner the blockheads of former days, who as urchins were birched and battered to expedite their loitering steps, have taken this mean way to revenge themselves on their tormenters by belittling them and holding them up to the contempt of the world.

Somehow or other, we generally meet an apologizing or indulgent manner towards the class. It is taken for granted that there are certain shortcomings always accompanying a teaching career, such as are necessarily contracted from its demands and pursuits; and therefore we have fixed on a certain standard to measure the pedagogue as a class, and writers have remarkably agreed upon certain salient outlines of this standard. We observe frequent allusions in kindly extenuation of the poor man's infirmities, and sometimes his severity is kindly excused as in the following:

"Or if severe in aught,
The love he bore to learning was in fault."

It is remarkable how intimately the idea of punishment

has been associated with teaching from all time ; and scarcely ever do we find an allusion to a pedagogue without at the same time a reference to his flogging propensities. It would seem that mankind, when everything else of the teacher's influence was forgotten, have only remembered the pains connected with his office. If there should be set up in some Museum of Curiosities a picture of a pedagogue of a former epoch, to which we could point the pampered delicately trained youth of the present day, and remind them how much they are indebted to the refined benevolent spirit of the age for their deliverance from a *monstrum horrendum* that inflicted such untold-of woes on the youth of former times, it might be in the following style :

In his noisy mansion seated on a pedestal he should be enthroned as monarch of all he surveys ; his brow wearing a reprimanding menace to juvenile antics and puerile peccadilloes, or scowling on scholastic shortcomings ; his face betokening the condescending compassion of profound knowledge for untutored ignorance ; in his hand a large broad ruler, the emblem of his power, the woful instrument of executive justice, and the signal of terror to all within his jurisdiction ; while a little way off would be seen a yelping urchin, who had his tricks just terminated or his efforts stimulated by its application.

“ And so he sits, amidst the little pack,
 That look for shady or for sunny noon,
 Within his visage like an almanack—
 His quiet smile foretelling gracious boon :
 But when his mouth droops down, like rainy moon,
 With horrid chill each little heart unwarms,
 Knowing that infant show'rs will follow soon,
 And with forebodings of near wrath and storms
 They sit, like timid hares, all trembling on their forms.”

An old writer pleasantly refers to the liberality of stripes in his time :

“ From Paul's I went, to Eton sent,
 To learn straightways, the Latin phrase,
 Where fifty-three stripes given to me
 At once I had.

" For fault but small, or none at all,
It came to pass thus beat I was :
See, Udal, see, the mercy of thee
To me poor lad."

Not every one preserved such a kind and appreciative remembrance of the benefits of the rod as did Hood, who thus alludes to the birching habits of his days :

" Ay, though the very birch's smart
Would mark those hours again,
I'd kiss the rod and be resigned
Beneath the stroke, and even find
Some *sugar* in the cane."

In the description of this class by writers, there is one trait which they all set forth prominently: it is the ostentatious display they are addicted to make of their knowledge, and their parade of Latin phrases and quotations, as well as a verbose formal manner of speaking; and here we may note a very interesting etymological fact, namely, that in consequence of this disposition, the word *pedant*, which Shakespeare uses as a synonymous term for schoolmaster, came in the course of time to be applied to any one who vainly and ostentatiously displays his learning.

The character of Holofernes in "Love's Labor Lost" shows out this trait in a masterly manner. There we observe how on every matter, in every way, the pedant or schoolmaster makes use of his Latin; and whatever knowledge besides he possesses, he parades on all possible occasions. So noticeable was this parade and ostentation, that Moth observes to Costard: "They have been at a great feast of languages, and stolen the scraps;" to which Costard replies: "O! they have lived long on the alms-basket of words. I marvel thy master hath not eaten thee for a word."

Admirably does Sir Walter Scott indicate this trait in his "Dominie Sampson." He shows him too as given to tiresome verbosity, and a constant use of Latin quotations, with the same stilted, formal mode of speaking. We cannot help observing how exact in this respect is the resemblance between the two characters. Holofernes is represented to

us as possessing more vivacity and humor with a rollicking joviality. Goldsmith, too, has not failed to point out this same liability to high-sounding words in his description of the "Village Schoolmaster"—

"While words of learned length and thundering sound
Amazed the gazing rustics ranged around—
And still they wondered, and still the wonder grew,
That one small head could carry all he knew."

Quaint Thomas Fuller alludes to this pedantry in this manner: "Out of school he is no whit pedantical in carriage or discourse; contenting himself to be rich in Latin, though he doth not jingle with it in every company in which he comes."

With the personal appearance and peculiarities of the schoolmaster writers have generally made much merriment, and in this respect the craft has been more severely caricatured. To many, a full-formed, corpulent, well-dressed pedagogue would be almost a phenomenon. The typical one must have a gaunt, spare form, thread-bare but neat garments, not cut in any modern style, or worn after any modern fashion; a figure of a rugged type, somewhat angular of course, and rather long, having an exact counterpart between the mental and moral organization and the external development. Washington Irving, in his "Ichabod Crane," has exactly given us in his inimitable style the lineaments of such a personage, and in one sentence, which we quote, we have him admirably portrayed: "To see him striding along the profile of a hill on a windy day with his clothes bagging and fluttering about him, one might have mistaken him for the genius of famine descending upon the earth, or some scarecrow eloped from a corn-field." But Scott, in his "Dominie Sampson," has most especially and happily delineated this physical peculiarity of the pedagogue. Were it not that we are well aware of the poor man's innate goodness of soul, and real worth, we would be disposed to treat him as an exceedingly unlovable, if not repulsive, person, from the grotesque and almost hideous spectacle he presents to us in his outward appearance. Who cannot read without laughing heartily at his utter

indifference to his personal appearance, and contempt for the world's gay adornment, at the *ruse* which was practised on him when McLorin surreptitiously took away his time-honored, thread-bare, patched garments, and substituted, piece by piece, a new set, without the good old man being aware of it? Life was too solemn a thing with him to admit of thoughtless amusements; none but "serious" conversation was allowable, and a hearty laugh was the expression of a spirit ripe for the destination of unforgiven sinners.

Society has been reproached for its neglect and want of appreciation for a calling that properly discharged has an incalculable effect on its welfare; and it has been well observed, that there we find a most stable and advanced state where the teaching class are held in due esteem and importance, and their labors adequately rewarded. We are progressing in this respect. It is now no longer believed that a person who is absolutely worthless elsewhere will, if he have a modicum of learning, do very well for a teacher. We have been convinced that in this there is special training, special adaptability, and general culture required; and that it is not as it was represented by Fuller two hundred years ago, only necessary to have a rod and ferule to set up as a schoolmaster. The popular impression of a teacher in the present time is quite different from what it was a hundred years ago, and there is no doubt if such a personage is ever embodied in the pages of our future standard literature, he will have quite different features from those we have noticed.

It was not uncommon in time past to deplore the teacher's fate, to sympathize with his uncongenial employment, to represent him as a sort of drudge. Crabbe gives us a sketch of a teacher as follows:

" But Leonard—yes, for Leonard's fate I grieve,
Who loathes the station he dares not leave.
He cannot dig, he will not beg his bread;
All his dependence rests upon his head.
And deeply skill'd in sciences and arts,
On vulgar lads he wastes superior parts.
Alas! what grief that feeling mind sustains
In guiding hands, and stirring torpid brains:

He whose proud mind from pole to pole will move,
 And view the wonders of the worlds above ;
 Who thinks and reasons strongly—hard his fate,
 Confined for ever to pen and slate."

The sentiments here expressed were unhappily at one time too general, and perhaps even now are not quite rare. True, in such a career there is small field to play the heroic, but is it without distinctions? Has it no great names to enshrine in its temple of fame? A profession counting an Ascham, an Arnold, a Mann in its ranks, can never be ignored.

JOHN PROFFATT.

"NOW AND THEN."

I AM looking at the children of the present day, and *thinking* of those of the past. Looking, I contrast them unfavorably, if there is any longer such a period as childhood or girlhood. It appears to me that the extremes have met, and that from the *baby*, emerges the *woman*. These reflections and conclusions arise from what I *see*, and the knowledge I possess of the children of days long past. What would a child (I speak now of what used to be thought a child,) of eight, ten, or twelve years, think, in the city of New York, of being dressed in plain calico or merino, untrimmed, low necked and short sleeves, and rising at five in the morning to practise an hour, in a room without fire! To play in the cold and snow, requiring no wrapping, nor taking any cold from such exercise—to study from half-past six to nine in the evening, and work *faithfully* six hours during the day! *Can you find at this day* a girl well born, well educated, in one of the best schools New York city afforded, who never, until after the age of fourteen, had ever attended party, concert, or circus? I knew at that old time, *many*, and the writer of this article was one of twelve in the same class who attended this school, and who in six years never lost a day nor changed a teacher. All too were the children of wealthy parents, but fortunately of parents who looked on education as of paramount importance: con-

sidering it wiser to develop their children's minds by cultivating head and heart, rather than inciting only rivalry in dress and admiration. I very much fear if the question now were put, "What is the chief end of man?" the reply would be, that of man, to gain money by any means, and that of woman, to settle successfully in life. Here again is a marked difference. I recollect, in my school days, to have heard that the parent of one of my schoolmates had failed. It actually cast a gloom over the whole establishment, because he was thought to have kept back something from his creditors! How Eutopian in this day! Look at the number of divorces now and then. Then such things were almost unknown, and were thought disgraceful in the extreme. I grant that in some cases there was too much restraint, too much expected of the young, but has the excessive liberty now permitted improved their condition? Now that the parent has become the ruled instead of the ruler, are the children physically able to endure as those of the past were? Are not most girls and indeed boys, too, nervous and generally delicate? Why, at *twenty*, I would have laughed at such an idea as having nerves—now it is not an affectation. I have seen the hands of a stout looking boy shake as he wrote, like that of an old man, and every day brings to my knowledge instances of physical inability to application as of yore. I saw an idle brother of mine feruled until his hand bled! I admit this was terribly severe, but mark the result. Everything else had been tried to induce him to study—he was physically lazy and fast becoming worthless. Knowing that the punishment was merited, confident that any appeal to his parents would be of no avail, the youngster took to his books, and before attaining his twenty-first year was admitted to the bar, with the highest encomiums from the Supreme Judges; one of whom shook him warmly by the hand and wished him success, although an entire stranger to him, and while he lived he never relapsed into indolence, but was beloved and honored by all who knew him. Children of the present day have no responsibilities—all, even those of tender years, should be taught to know that they exert an influence for good or ill, and that in some way or other they can be useful. There is plenty of time

after school days are over for fashionable dissipation; and if children are properly reared, few will desire what is honorably and honestly beyond their reach. Children should have warm, substantial clothing, abundance and variety of food well prepared and served, regular hours, good bathing, regular and frequent exercise; and then, and only then, ought you to expect the mental labor necessary to make them men and women. Their studies should never be intensified from frivolous causes, and they should be taught that high mental culture is worth more than any fortune. I am not writing theoretically, but practically—from experience. Necessity, or perhaps I should more properly say misfortune, has compelled me to teach, and it is the difficulties in the way of success I daily encounter, that induces me to pen this article. No one has tasted more fully of life's pleasures than I, yet I unhesitatingly gave them up and educated my own children rather than enjoy luxuries at their expense. I do not believe in severity—it is rarely, if ever, necessary, but it is utterly impossible to educate a child mentally, morally or physically, if the present system is continued in, and the race will continue to degenerate until we shall be pigmies indeed.

S. W. C.

GREAT is Bankruptcy: the great bottomless gulf into which all Falsehoods, public and private, do sink, disappearing; whither, from the first origin of them, they were all doomed. For Nature is true, and not a lie. No lie you can speak or act but it will come, after longer or shorter circulation, like a Bill drawn on Nature's Reality, and be presented there for payment, with the answer, *No effects*. Pity only that it often had so long a circulation—that the original forger were so seldom he who bore the final smart of it! Lies, and the burden of evil they bring, are passed on; shifted from back to back, and from rank to rank; and so land ultimately on the dumb lowest rank, who, with spade and mattock, with sore heart and empty wallet, daily come in contact with reality, and can pass the cheat no longer.

—*Carlyle.*

SCHOOLS OF SWITZERLAND.*

A VISIT to over a hundred schools in the different Cantons has greatly enhanced my appreciation of the Swiss system of public instruction. The Swiss are a progressive people, and their excellent educational system is both the evidence and cause of general advancement. It contains some features worthy of imitation. The schools are supported by the State, are free to all, well attended, and highly prized by the people. In the studies of geography and arithmetic their methods are inferior to those adopted in America, but in language—exercises, history, and drawing, they greatly excel. The mastery of the mother tongue is the first aim, while the culture of the expressive faculties is made very prominent. They justly regard language as not only the medium of thought, but the chief agent in cultivating the memory and taste. The disciplinary influence of the study of language is kept in view, and to talk well is held to be a noble art. The daily school drills aim at this grand attainment. Choice selections of poetry and prose are committed to memory, and recited almost daily. Starting early, the memory is trained with surprising facility. I have been greatly pleased with the recitations of poetry by young pupils—long passages being given without hesitation or mistake.

The fact that there are three races in Switzerland—German, French, and Italian—and that these three languages are spoken in the Federal Assembly as well as in commercial intercourse, gives a practical interest to the study of the modern languages. Besides "the vernacular," the study of French or German is *required* in the schools, and is begun at a tender age. The faculty of language is, therefore, early developed. Under ten or twelve years is the memorial age for words and their forms. Beginning at the right age, the Swiss youth make most rapid and thorough progress in modern languages. The classics are also commenced early, and great proficiency is the result. In the study of any new

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language the pen is ever in hand, and there is constant practice in expressing ideas in that language. The proficiency of each pupil is measured by his ability to convey his thoughts in the new tongue. I commend this practice to our teachers.

History—too much neglected in America—is here made a most attractive and prominent study. This land is classic, vestiges of Roman rule and works abound, and memorials of battles and sieges in later times stimulate inquiry. The school-building itself has often a history of its own. I have inspected the College and Academy, founded by Calvin more than three hundred years ago, sat in the pulpit chair occupied by him, heard recitations and lectures in the very rooms where he taught, and with which are associated the names of John Knox, Neckar, Sismondi, Albert Gallatin, and a host of eminent men of Europe—for Geneva was the educational centre, where Protestant young men from England, France, and Germany were educated for nearly two centuries after the Reformation. Though, with one exception, the smallest Canton in Switzerland, no place of its size, in modern times, has exercised so wide-spread and happy an influence, both intellectual and religious. Among the ruling minds of the present day, Prince Bismarck is named as one who was educated in part here. Such memories awaken an historic spirit in the schools. Still more their monuments, walls, towers, ruins, and relics, their fountains—adorned with quaint emblems—their heroes and benefactors enshrined in storied marble, their hard won victories recorded in bronze, their archæological museum and library, with the manuscripts of Luther, Calvin, Beza, Melancthon, and others, foster an interest in the past.

The Swiss schools also excel in drawing. They understand both its practical bearing and its relation to general culture. Their skilled mechanics apply the art in drafting plans, forming decorative designs, and executing all nice work. They say that not the architect, builder, machinist, and inventor only must "draw," but that any craftsman, skilled in design, makes a better workman, whatever may be his trade. The world now pays substantial tribute to Switzerland for the exquisite taste displayed in the decorative

arts, in their unequalled wood carvings, their beautiful designs and chasings in gold and silver, their watches and their music-boxes; their silks and ribbons and their patterns for embroidery, and for their extensive printing, and dyeing manufactures. In the industrial schools special instruction is given in ornamental drawing, moulding and designing. In the girls' schools needle-work is taught to all. The Swiss believe in the dignity of labor, in the system of apprenticeship, and the thorough mastery of some trade. The theory that labor is menial, and that the tools of a trade are badges of servility, is foreign to them. They are ingenious and industrious. They have learned that ignorance means waste and weakness, that education is economy, that brains help the hands in all work, multiplying both the value and productive power of mere muscles.

In this direction the Polytechnic Institute at Zurich is doing a noble work. It is already deservedly the pride of the nation, is liberally supported by the Government, and has a very large and able corps of professors, and 600 students. Its celebrity has attracted many students from other lands. England has nothing equal to it. Indignant that his own country should so neglect both popular and technical education, J. Scott Russell says:—

“The contrast between England and Switzerland is that England spends more than five times as much on pauperism and crime as she does on education, and Switzerland spends seven times as much on education as she does on pauperism and crime.”

The recent progress of Switzerland in internal improvements, manufactures, and wealth is great. While other causes have helped, the most efficient agency is the marked improvement in popular and technical education. Railways thread her valleys and climb hills, and even mountains, where the construction is costly and difficult. The telegraphic lines are relatively more numerous than in America, and, being a part of the postal system, the rates are low and uniform.

The roads are the best in Europe, and yet without tolls. Even the most costly suspension bridges are free. The Swiss Government is the most liberal one in Europe. It is

of the people, and for the people. It happily illustrates the national motto, "Un pour tous, tous pour un"—"One for all, and all for one." Such a Government can afford to trust the people. Hence there is a free press, free speech, free schools, freedom in religion, and freedom in traveling, no passports being required, and no examination of luggage; no standing army, and no gendarmes ever brandishing the threatening hand of power, as elsewhere in Europe. There is relatively far less criminality here than in England. The fact just stated in the *Swiss Times*, that in the village of Illgow, containing 1,230 inhabitants, not one individual during the last twenty-five years has been brought into court as prisoner, or sued for debt, can be said of few places of equal population in the world.

The schools and the press have lately fraternized the whole nation. The several cantons were formerly isolated both in fact and feeling, with little intercommunication, and less sympathy, with distinct local customs and laws. Some still strongly cherish their hereditary usages. A few are proud of their Roman origin, and keep up their *lictors* with "patrician" and "plebeian" ideas. Berne (Bear) still retains Bruin as its heraldic emblem, and has this figure on its coat of arms, and its fountains—it guards many ancient dwellings, and sometimes stands forth, equipped with full panoply of shield, banner, and sword. Gigantic bears in granite guard the city gates, and in the wonderful clock a whole troop of bears perform at the striking of the hour, and the city maintains a menagerie of bears at the public expense. Geneva, in like manner, honors its emblem—the eagle—by keeping a flock of eagles in a series of huge cages. Berne, while abounding in most beautiful modern edifices, still maintains its unique and historic character more than any other Swiss city. But education, the press, railroads, telegraphs, and a wise central government have conciliated the people of these twenty-two cantons. Though separate in race, religion, and language, they are one in national sympathy and interest, proud of their history, and prouder still of their recent progress and present prosperity. While beggars are found everywhere in Europe, there is less pauperism in Switzerland than in any other nation on the conti-

nent. With no communism, there is still a general diffusion of property, and almost every one is a landowner. Of the 485,000 householders, only 20,000 possess no land. The ownership of land is an element of dignity, and conscious elevation to the individual, and thus of strength to the nation.—*Swiss Times.*

WHAT KNOWLEDGE IS OF MOST WORTH?—IX.

RANK OF ÆSTHETIC CULTURE.

NOW we come to that remaining division of human life which includes the relaxations, pleasures and amusements filling leisure hours. After considering what training best fits for self-preservation, for the obtainment of sustenance, for the discharge of parental duties, and for the regulation of social and political conduct; we have now to consider what training best fits for the miscellaneous ends not included in these—for the enjoyments of Nature, of Literature, and of the Fine Arts, in all their forms. Postponing them as we do to things that bear more vitally upon human welfare; and bringing everything, as we have, to the test of actual value; it will perhaps be inferred that we are inclined to slight these less essential things. No greater mistake could be made, however. We yield to none in the value we attach to æsthetic culture and its pleasures. Without painting, sculpture, music, poetry, and the emotions produced by natural beauty of every kind, life would lose half its charm. So far from thinking that the training and gratification of the tastes are unimportant, we believe the time will come when they will occupy a much larger share of human life than now. When the forces of Nature have been fully conquered to man's use—when the means of production have been brought to perfection—when labor has been economized to the highest degree—when education has been so systematized that a preparation for the more essential activities may be made with comparative rapidity—and when, consequently, there is a great increase of spare time; then will the poetry, both of Art and Nature, rightly fill a large space in the minds of all.

But it is one thing to admit that æsthetic culture is in a high degree conducive to human happiness; and another thing to admit that it is a fundamental requisite to human happiness. However important it may be, it must yield precedence to those kinds of culture which bear more directly upon the duties of life. As before hinted, literature and the fine arts are made possible by those activities which make individual and social life possible; and manifestly, that which is made possible, must be postponed to that which makes it possible. A florist cultivates a plant for the sake of its flower; and regards the roots and leaves as of value, chiefly because they are instrumental in producing the flower. But while, as an ultimate product, the flower is the thing to which everything else is subordinate, the florist very well knows that the root and leaves are intrinsically of greater importance; because on them the evolution of the flower depends. He bestows every care in rearing a healthy plant; and knows it would be folly if, in his anxiety to obtain the flower, he were to neglect the plant. Similarly in the case before us. Architecture, sculpture, painting, music, poetry, &c., may be truly called the efflorescence of civilized life. But even supposing them to be of such transcendent worth as to subordinate the civilized life out of which they grow (which can hardly be asserted), it will still be admitted that the production of a healthy civilized life must be the first consideration; and that the knowledge conducing to this must occupy the highest place.

And here we see most distinctly the vice of our educational system. It neglects the plant for the sake of the flower. In anxiety for elegance, it forgets substance. While it gives no knowledge conducive to self-preservation—while of knowledge that facilitates gaining a livelihood it gives but the rudiments, and leaves the greater part to be picked up any how in after life—while for the discharge of parental functions it makes not the slightest provision—and while for the duties of citizenship it prepares by imparting a mass of facts, most of which are irrelevant, and the rest without a key; it is diligent in teaching every thing that adds to refinement, polish, éclat. However fully we may admit that

Pseudo Colleges.

extensive acquaintance with modern languages is a valuable accomplishment, which, through reading, conversation, and travel, aids in giving a certain finish; it by no means follows that this result is rightly purchased at the cost of that vitally important knowledge sacrificed to it. Supposing it true that classical education conduces to elegance and correctness of style; it cannot be said that elegance and correctness of style are comparable in importance to a familiarity with the principles that should guide the rearing of children. Grant that the taste may be greatly improved by reading all the poetry written in extinct languages; yet it is not to be inferred that such improvement of taste is equivalent in value to an acquaintance with the laws of health. Accomplishments, the fine arts, *belles-lettres*, and all those things which, as we say, constitute the efflorescence of civilization, should be wholly subordinate to that knowledge and discipline in which civilization rests. *As they occupy the leisure part of life, so should they occupy the leisure part of education.*—HERBERT SPENCER.

PSEUDO COLLEGES.

UNDER existing circumstances the right of any institution to call itself a College cannot be questioned, there being no recognized authority for determining what ought to be indicated by that title. In consequence, therefore, of the absence of any rule regulating its use, the name has been applied so indiscriminately, that it no longer has any specific or distinctive meaning. "Smith's College" may be either an institution of the same grade as Yale and Harvard, or an establishment where first-class accountants and telegraph-operators are manufactured in the shortest possible time: its exact nature can be ascertained only by personal observation, a reference to catalogues being best calculated to intensify the mystery surrounding it. This unsatisfactory condition of things will probably always exist, though there is a bare possibility, and on this we base our hopes that some day a change will be effected. Wise

legislators may take it into their heads to determine by law what shall constitute a College, and thus compel all institutions passing under that name, but destitute of the requisite qualifications to assume a title more in accordance with their true character. Such an act would, doubtless, be of great benefit to the interests of the higher education, but its enforcement would, in all probability, develop the weaknesses of many of our eminent educators—"Presidents," whose most earnest labors had been devoted to impressing on the minds of youthful seniors the duty of "obedience to law," as laid down in some octavo Moral Philosophy would prove that "he who teaches is himself not always best taught" by rebelling against a statute which would degrade them to the honorless position of "Principals"; "Professors," who had been glorying in the possession of a "chair," would not hesitate to demur at a law which would transfer them to the simple and numerous class of "Mr's."; and "students at Jones' College" might be led into insurrection at finding themselves only "boys at the Academy." This result, though devoutly to be wished, cannot reasonably be expected. We may, therefore, look for, at least, the usual number of catalogues emanating from the so-called Colleges, and expect to find each a sample of bombastic writing and a decisive proof of the printer's skill. One of these is before us. We have looked at it long and earnestly; have noted its blue cover (a little too blue for our fancy), and observed the graceful curves of its ornamental border. We know that the first page is printed in precisely the same style, and contains exactly the same words as the cover, though on white paper instead of blue. Though we have closed the pamphlet for a moment, we remember that it contains an engraving, very much after the customary fashion, which shows that there are three "Halls" named in honor of generous and munificent donors, whose spirits ascended upon high, look down approvingly, etc. Indeed, as a picture-book, the document before us is so much of a success, that we are inclined to think it will be of more service in quieting disturbances among the youthful inhabitants of the nursery than in attracting students to the Collegiate halls. It may also be valuable as an "architectural chart,"

for, judging from the engraving, the central building illustrates about all the styles and orders that have been in vogue since the creation. And with these important observations we would have dismissed the catalogue from our notice and thought no more of "—— College" had not our eye chanced to see the word "Faculty," and under it a list that seemed worthy of some consideration. After such a blue cover and so elegant a picture one would naturally expect to find the names of many learned gentlemen distinguished in the several departments of science and art. The faculty of "—— College" would fail, we fear, to realize such expectations, for it is neither numerous nor composed of many, or indeed of any men of much renown. Such as it is, however, it is, doubtless, equal to the labors required of it, there being an average of one Professor to five students. The President, a Rev., does duty as Professor of Mental and Moral Science; another Rev. is Professor of the Greek Language and Literature; and a third holds the same relation to the tongue of the Cæsars. These are all who are deemed worthy of positions in the faculty, though they are aided and their deficiencies supplemented by a lady, whose position is indicated by the somewhat humble title of "Assistant Teacher." In our opinion this is a misnomer which does her great injustice. The information in the catalogue—and we have no other means of knowing anything concerning her, is sufficient to convince us that her intellectual attainments are of the highest possible order, and that physically as well as mentally, she is put together in no ordinary manner. As the mathematics, natural sciences, modern languages, and the ordinary English studies are mentioned in the "course of study," but not provided for in the faculty, it is safe to infer that the somewhat laborious duty of imparting a knowledge of them devolves upon the only remaining instructor, the accomplished and versatile "Assistant Teacher." In the English department there are sixty-two pupils, none of whom study Mental or Moral Science, Greek, or Latin. They do not, therefore, derive any advantage from the presence of the three worthy Professors, but are compelled to depend for their daily supply of mental pabulum upon the resources of the well-furnished "Assistant

Teacher." That she has held the position under these trying circumstances for more than five years without any apparent signs of exhaustion, is sufficient evidence that she is physically a female Samson, and mentally a second Solomon. With such efficient help, the Professors are free from all disturbing or distracting cares, and are enabled to devote all their energies to the six Freshmen, four Juniors, and five Seniors, whose names are found on the roll of "—— College." The Sophomore class has no students—why, we know not—unless it be that all of the "foolishly wise" are included in the number of the "Faculty." Somebody at our right suggests that we have made a mistake, and states that it is more than probable that the Latin man teaches arithmetic, and that he of the Greek department takes a hand in at history and geography. This may be so, and for the sake of the over-worked Assistant, we hope it does represent the true state of affairs. But the catalogue, the beautiful blue-covered catalogue, does not warrant the belief.

A College with fifteen students! A Faculty of three Professors, and an Assistant to do the work! What nonsense! Yet this is no infant establishment; it has lived its miserable life for more than fifty years, and is probably now at the very meridian of its glory, from which we care not how soon it hastens to its setting. It is but one of those experiments of denominational rivalry, the end and object of whose existence seems to be to bring discredit on the higher education, and to produce in the minds of many a contempt for college-bred men. The number of these pretentious institutions is rapidly increasing. The latest addition is the "—— University," from whose advertisement we quote: "The Course of Study in this Institution is designed to *prepare pupils for any class in College*, for the advanced study of artists, and for commercial business. The University, *as the name indicates*, contains the following distinct departments, &c." That the "University" and all kindred institutions may soon be numbered with the dead, is our most earnest wish. They accomplish little or no good in comparison with the amount of labor and expense connected with their support, and serve in no way to benefit the cause of true and solid education. It will give us pleasure to chronicle the demise of one and all of them.

*PUNISHMENT FOR MISCONDUCT OUT OF SCHOOL.**

WHEN the late Hon. John C. Spencer, a gentleman of such eminent legal ability, that he had scarcely a peer at the New York bar, was Superintendent of Schools for the State of New York, he is said to have given the following opinion: The authority of the teacher to punish his scholars extends to acts done in the school-room or playground only; and he has no legal right to punish for improper or disorderly conduct elsewhere. (Randall's Com School Sys., p. 262). But the opinion of any one man, whatever may be his position and learning, can not stand against the decision of the courts. We have preferred, therefore, to go back of this opinion, and look at the law for ourselves. Although we must confess that in the outset we expected to find authorities to support the opinion rather than to controvert it, now, however, after long and laborious research, we believe that our preconceived notions were erroneous; for although the courts have rarely been called upon to consider this subject, it has, nevertheless, been before them, and the law upon it has been fully and clearly explained.

A Remarkable Case.—In the Court of Common Pleas of Lawrence county, Indiana, a teacher was tried for assault and battery, and found guilty under the following circumstances: The evidence showed that the alleged assault and battery was inflicted by the defendant in the capacity of a school-master, on the prosecutor, a boy of some fifteen or sixteen years of age, as a pupil attending his school, by way of correction, for a violation of the rules of the school by the prosecutor. It also appeared that the correction was administered by the defendant on the prosecutor after the adjournment of the school in the evening, and while the latter was on his way home, for an act committed during that time, and which was seen by the defendant, who thereupon administered the correction by the infliction of sundry stripes with an ordinary-sized rod. There was nothing conducing to show that the correction was other than reasonable and

* Extracts from Walsh's "School Lawyer."

moderate. The court instructed the jury that, although the defendant, as a teacher, was by law vested with the delegated authority to exercise control over the prosecutor as his pupil during school hours, yet after the adjournment of his school, and after the prosecutor had left and was on his way home, his authority over him had terminated, and his act of administering correction under the circumstances was unauthorized by law, and they must find accordingly; but in fixing the defendant's punishment, they should take into view all the circumstances attending the case, and especially the motives of the defendant in committing the act, and if they should find the circumstances to warrant it, they might fix the fine as low as one cent, and without costs. Under these instructions the jury were constrained to find the defendant "guilty;" but they fixed the fine at "one cent, and without costs," as had been suggested by the court. (*State of Indiana v. Ariel Flinn*, in *Bedford Independent*). Here, then, we find both court and jury evidently feeling themselves hampered by what they supposed to be the law, but virtually justifying the act of the teacher, which no doubt was right and proper. This case has often been cited as a strong one against the teacher's right to punish for misbehavior on the way to and from school, but we can not so regard it. We think it an excellent illustration rather of what courts and juries will do to shield the prudent and conscientious teacher from harm. The only indiscreet thing the teacher in this case seems to have done was to inflict the punishment out of school. We think it would have been more prudent to wait until the next day, and inflict the punishment in the school. It is always better to take time for reflection before an act, the propriety of which is likely to be at all questioned. Besides, the teacher's jurisdiction in the school-room would be less likely to be disputed, and, if it were, he could find more and better authorities to support him. In fact, the authority of the teacher to punish for the offense may in some measure depend upon whether the scholar continues under the jurisdiction of the master. For, if the scholar, after leaving the school in the evening, committed an offense as in this case, but never again returned to the school, we think that the teacher's right to inflict pun-

ishment under such circumstances would be more than doubtful. Consequently, we would advise the punishment to be deferred in all cases until it can be inflicted in the school-room.

In RHODE ISLAND the teacher should endeavor to exercise an inspection over the conduct of his scholars at all times. But the power to punish for offenses committed out of school is considered doubtful. In a case where a boy had committed a theft out of school the teacher called him to account for it, and punished him for refusing to answer. The court ruled that the teacher had no right to punish him for refusing to *confess a crime for which he might be punished at law*. In connection with this decision it must be borne in mind that the law does not require criminals to confess their guilt. Consequently, any punishment for such a refusal, whether the crime is committed in school or out of school, would probably meet with no favor in the courts. The law *permits* criminals to confess their crimes, but will not *force* them to do so. The decision in this case, then, does not place the Rhode Island court against the policy of punishing for misconduct out of school. (See Pub. School Acts of R. I., 1857, with Rem. p. 53). The following upon this subject is from an excellent French treatise upon education, by J. Willm, Inspector of the Academy at Strasbourg, p. 176: "The last question which presents itself is, how far teachers should pay attention to the conduct of the pupils out of school, and especially at the time when they resort to it or return home. The road leading to school is a part of it, if we may so speak, as well as the play-ground. Consequently any disorders committed by the pupils on it ought to be suppressed by the teacher. He ought especially to watch over them at their play, for the sake of discipline, as well as for that of education in general. Their games are, as has been said, of serious importance to him. The conduct of the pupils, when under the paternal roof, and everywhere but in the school or the road leading to it, escapes all the means of discipline; but the teacher ought not to be indifferent to that conduct, especially in the country; he should carefully inquire concerning it, for the sake of moral education. For

the same reason, he will have to watch over his own conduct out of school, and avoid whatever might tend to diminish the respect his pupils owe to him, and which is the chief condition of the success of his mission."

MASSACHUSETTS.—"The question is not without some practical difficulty, how far the School Committee and teachers may exercise authority over school children before the hour when the school begins or after the hour when it closes, or outside of the school-house door or yard. On the one hand, there is certainly some limit to the jurisdiction of the committee and teachers out of school hours and out of the school-house; and, on the other hand, it is equally plain, if their jurisdiction does not commence until the minute for opening the school has arrived, nor until the pupil has passed within the door of the school-room, that all the authority left to them in regard to some of the most sacred objects for which our schools were instituted would be but of little avail. To what purpose would a teacher prohibit profane or obscene language among his scholars, within the school-room and during school hours, if they could indulge it with impunity and to any extent of wantonness as soon as the hour for dismissing the school should arrive? To what purpose would he forbid quarreling and fighting among the scholars at recess, if they could engage in single combat, or marshal themselves into hostile parties for a general encounter within the precincts of the school-house, within the next five minutes after the school-house should be closed? And to what purpose would he repress insolence to himself, if a scholar, as soon as he had passed the threshold, might shake his fist in his teacher's face and challenge him to personal combat? These considerations would seem to show that there must be a portion of time, both before the school commences and after it has closed, and also a portion of space between the door of the school-house and that of the paternal mansion, where the jurisdiction of the parent on one side, and of the committee and the teachers on the other, is concurrent.

"Many of the School Committees in this Commonwealth have acted in accordance with these views, and have framed

regulations for the government of the scholars, both before and after school hours, and while going and returning from the school. The same principle of necessity, by virtue of which this jurisdiction out of school hours and beyond school premises is claimed, defines its extent and affixes its limit. It is claimed because the great objects of discipline and of moral culture would be frustrated without it. When not essential, therefore, to the attainment of these objects, it should be forborne."—(10 Report of Hon. Horace Mann).

OHIO.—The legal right of the teacher to punish his scholars for disorderly acts done in the school-room, or on the play-ground before the opening of the school, after its close, during morning or afternoon recess, or at noon, has been fully recognized by the courts of this country. But whether his authority to punish his scholars extends to immoral or disorderly conduct elsewhere, is not so fully established. By some it is contended that the legal right of a teacher to inflict corporal punishment upon a scholar in any case is derived from the fact that he stands in *loco parentis*, and that, therefore, it can not be extended to acts done before this relation has commenced, or after it has terminated, without the express consent of the parent. It is further contended that this delegation to the teacher of the power allowed by law to the parent over the person of his child does not take place till the child has reached the school premises, and must end when he leaves for home. On the contrary, it is maintained by others, that the right of a teacher to hold his scholars responsible for improper conduct on their way to and from school is fully sanctioned by usage. Under all the circumstances, it is believed that the most prudent course for a teacher to take in a case like the one presented would be to notify the parent of the misconduct complained of, and if his permission to punish the offending scholar can not be obtained, and the disorderly behavior be repeated, then to refer the matter to the Board of Education. There can be no doubt that boards of education possess the legal power to make and enforce such rules and regulations as, in their judgment, may be necessary for the best interests of the schools within their jurisdiction; and it is their duty as well

as their right to coöperate with the teacher in the government of the school, and to aid him to the extent of their power and influence in the enforcement of reasonable and proper rules and regulations, and to dismiss a scholar from the school, whenever he uses at school, or on his way to or from the same, such rude, vulgar, or profane language, and exhibits such a degree of moral depravity generally, as to render his association with other scholars dangerous to the latter, or whenever he manifests such violent insubordination as to render the maintenance of discipline and order in the school impracticable or extremely difficult. It is also the duty as well as the legal right of the local directors to see that the general character, usefulness, and prosperity of the school are not impaired by allowing those to remain in it whose whole influence, conduct, and bad character have forfeited all claim to the enjoyment of its privileges. (H. H. Barney, Commissioner of Com. Schools, 1855).

We would remark here, that the teacher, in legal effect, does stand in *loco parentis*; but he is clothed with his authority by law and not by any particular parent or parents. This is evident from the fact that the teacher has precisely the same authority over his scholar whether the parents be living or not. The child, by entering the school, is at once under the jurisdiction of the teacher, and the only difficulty the law has upon the point is to determine definitely just where that jurisdiction ought in justice to all parties to terminate. There is no necessity for any delegated authority from the parent; the law implies that, and even grants it, whether the parent consents or not. The only way for the parent to limit the legal jurisdiction of the teacher is to take his child out of school. The Board of Education, however, being clothed with sufficient power by law, may define the jurisdiction of the teacher, and, unless they transcend their power, he must submit to their ruling. There is no privity of contract between the parents of pupils to be sent to school and the schoolmaster. The latter is employed and paid by the town, and to them only is he responsible on his contract. (23 Peck. 224; 14 Barb. 225; 38 Maine, 376).

(To be Continued.)

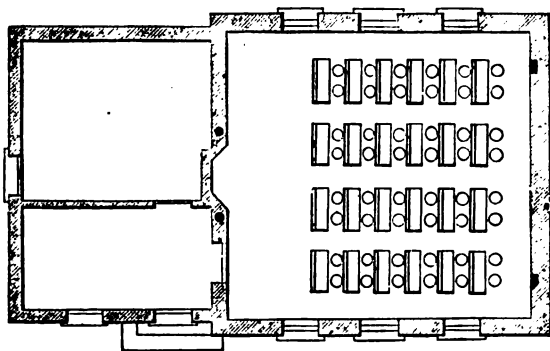
*SCHOOL-HOUSES FOR THE COUNTRY.**

IN many parts of New England, and in several other of the northern States, a popular form of a school-house is that of a building with a side to the street, with a smaller building used for a wood-house, extending along in a line with the main building directly upon the street. Usually, the entrance is through an open doorway into the wood-house, and thence directly into the school-room.



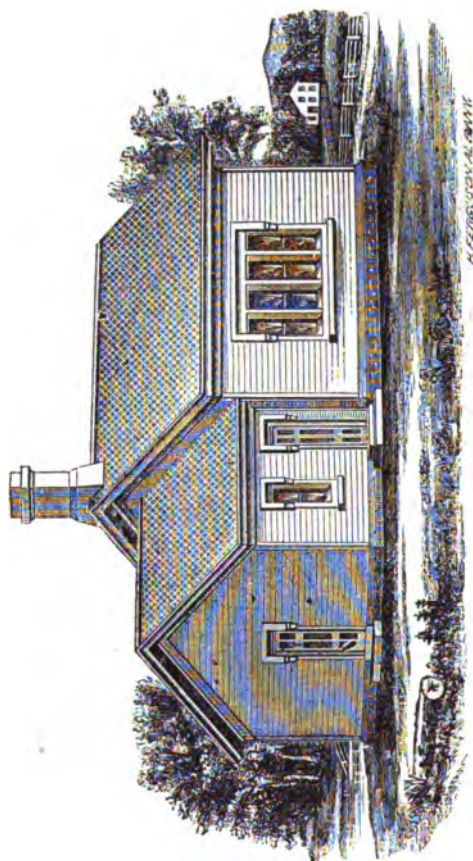
The advantages of the plan are cheapness of structure and convenience of access to the fuel. In regions where the storms of winter are severe and the snows are deep, the situation of the building directly upon the roadside, with but a single entrance to both the wood-house and the school-room, favors economy in the removing of snow and in the construction of paths. The wood-house also affords protection to the entrance of the school-room, and may be considered as an apology for an entry-way.

But this arrangement is faulty in several particulars. The long, continuous roofs, or one gable falling beneath another, gives to it an unsightly appearance, and there is no visible outside door to the main building. There is but one entrance



* From *Johannot's Complete Work on "School-houses."*

for the two sexes, and no lobby for hats and outer garments. In the elevation given, an effort has been made to preserve the main features of this plan, but to so modify it in details as to correct some of the most obvious faults. At best, however, this can only be done partially, as some of the most serious faults are essential parts of the plan.

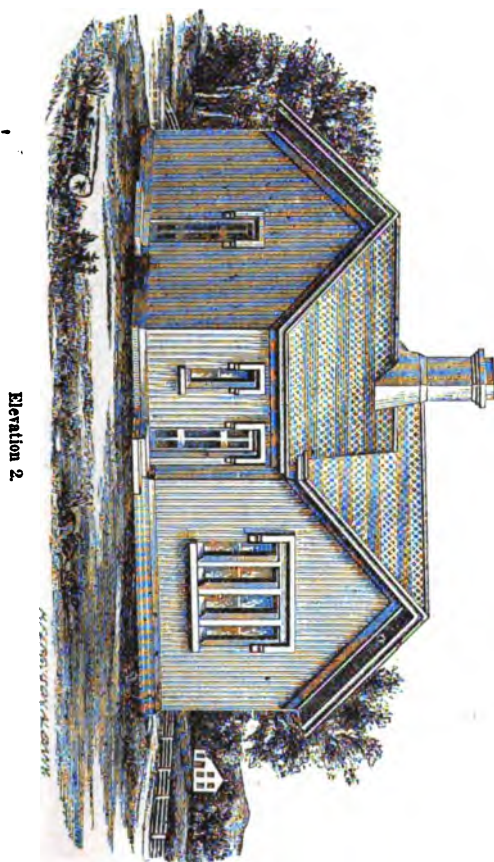


Elevation 1.

In the plan given, page 37, the wood-house is entirely inclosed, and a front-door is constructed for a main entrance into the school-room, and a side-door for the admission of wood. A partition has been made to extend through the wood-house, cutting off the front part for an entry-way and a lobby for hats and cloaks. In the school-room a space has

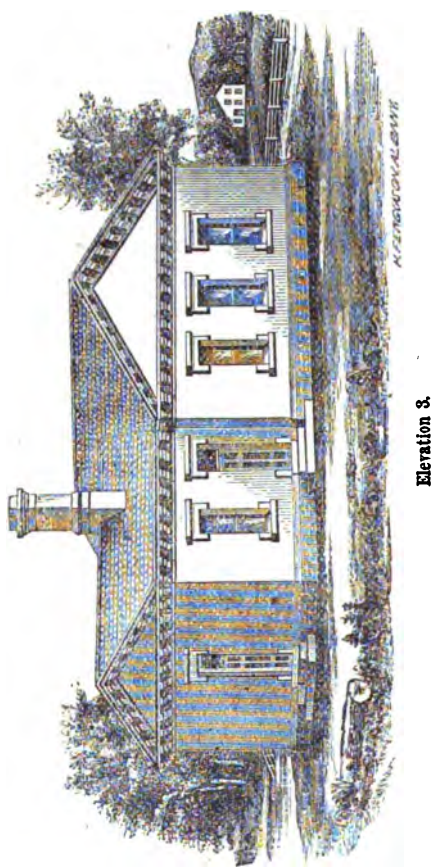
been left for a fire-place ; but in case a stove is used it should be placed in the front corner farthest from the door. The wall in front then may be used as a black-board.

The size of the building is immaterial, as the same general plan may be made to accommodate from twenty to one hundred pupils. For all but very small districts, the houses having two entrances are much to be preferred.



ELEVATION NO. 1.—This is a very plain elevation of a wood structure furnished with clap-boards. The arrangement of the wood-house, narrower and lower than the main building, and the construction of the doors, give to the building an idea of proportion, and make it a great improvement upon the open wood-house style.

The windows in the main building are grouped together for the triple purpose of economy in construction, finer architectural appearance, and a better disposition of light. The separate windows, however, can be used if preferred. The large ornamental chimney is a feature which gives character to the whole structure, and which ought not to be omitted.



Its large size is for the purpose of affording room for both smoke and ventilating flues.

ELEVATION NO. 2.—The principal difference between this and No. 1 is that the roof of the main building is turned in the opposite direction, and is at right angles with the roof of the wood-house instead of parallel with it. Architectu-

rally, this is a better arrangement, as one gable ought not to come directly beneath another. In the picture this building is finished with battens; but clap-boards may be used if preferred. In case battens are used, the boards should all be narrow, not exceeding eight inches in width, and the battens only wide enough to cover the joint, and they should always be nailed through the middle.

ELEVATION NO. 3.—In essential features it is like No. 2. The roof is of the same general description, but less steep. The cornices of the two buildings are upon the same level, and an ornamental cornice extends across the gables. The windows are represented as separate, but they may be grouped as in 1 and 2. The finish of the design is in brick, though either brick or wood may be used for either of the elevations. This design is specially adapted to a level country, where it is in harmony with the scenery.

TOBACCO—BY A SMALL BOY.

TOBACCO grows something like cabbages, but I never saw none of it boiled, although I have eaten boiled cabbage and vinegar on it, and I have heard men say that cigars that was given to them on election day for nothing, was cabbage leaves. Tobacco stores are mostly kept by wooden Injuns, who stand at the door and try to fool little boys by offering them a bunch of cigars, which is glued into the Injun's hands and is made of wood also. Hogs do not like tobacco; neither do I. I tried to smoke a cigar once, and it made me feel like Epsom salts. Tobacco was invented by a man named Walter Raleigh. When the people first saw him smoking they thought he was a steamboat, and as they had never seen a steamboat, they were frightened. My sister Nancy is a girl. I don't know whether she likes tobacco or not. There is a young man named Leroy who comes to see her. He was standing on the steps one night, and had a cigar in his mouth, and he said he didn't know as she would like it, and she said, "Leroy, the perfume is agreeable." But when my big brother Tom lighted his pipe, Nancy said, "Get out of the house, you horrid creature, the smell of tobacco makes me sick."

THE SONS OF PESTALOZZI.

FROM THE GERMAN.

CHAPTER XVI.—*Continued.*

Wülfig and his wife tried to relieve their hearts while they were anxiously watching the heavy and feverish breathing of their sleeping guest. For his sake they had most unjustly suffered, and even now the world looked upon them with suspicion. But no complaint escaped their lips, they seemed to have acquiesced in their fate, attributing it to unflinching gratitude for their benefactors. Even their children had accustomed themselves to share in the disgrace of their parents. But their filial devotion was not diminished thereby, though they had felt compelled to utilize their talents in foreign countries.

After a long silence the clock struck twelve. "Do not harbor any wicked thoughts," said Mrs. Wülfig to her husband. Wülfig, shaking his head, looked at her with widely opened eyes. "The Lord will turn everything for the best," she added. "But, as you said," replied Wülfig, "The last shall be worse than the first!" At these words, the servant who was to relieve Mrs. Wülfig in watching at Waldner's bedside, entered the room.

* * * * *

When Nesselborn reached home, he found a note from Dr. Staudner, who requested him to send his daughters Levana and Adelgunde, in full dress, to his house before 8 o'clock the next morning. He added that he would, perhaps, be able to conjure the tempest. Neither Nesselborn nor his wife could understand Staudner's purpose. But Mrs. Nesselborn comprehending, at least, that her daughters must appear in full dress, went to select their most suitable dresses and trimmings.

Early next morning Prince Porphyrogenitus received a call from one of his friends of the Russian embassy, to whose care he had temporarily assigned his sons. By him

he was informed of all that occurred between his sons and Theodore Waldner. He heard that the young princes had dangerously wounded the latter, and had then betaken themselves to hurried flight on their hired horses. On this furious ride the horse of one of the princes had seriously injured several persons on the street, in consequence of which both young men had been stopped and arrested by the police. The old Prince, hearing this bad news, flew into a passion. He paced up and down his room, swearing and reiterating the words, "I will crush that fellow Nesselborn!"

As soon as his Russian friend had left him, a servant handed him the card of School Councillor Bögendorf, who was immediately admitted. Bögendorf politely expressed his regret at what had occurred the day before, and after exchanging some remarks, shifted his conversation to the object that brought him there. This was, ostensibly, the advice which the Prince had asked of him as to the appointment of a governess for his daughter Axinia. His real object, however, was to save, if possible, Nesselborn from the blow which the Prince was preparing for him. Whether this intention arose from any warm interest in his old university friend, or whether the conversation he had had with Staudner on the previous day had shaped his course, may be left undecided. But Bögendorf had another object in view. He fondly hoped that Staudner might become his son-in-law by marrying his daughter Theophania. Of late, however, Staudner's partiality for Gertrude Nesselborn had given him great uneasiness. It was no secret that Gertrude was to be induced to remain in her uncle's house, and this project, if carried out, seemed to be dangerous to his favorite plan. Gertrude herself rather wished to become the governess of Princess Axinia, and Bögendorf thought he might, by advising the Prince, get rid of a dangerous rival of his daughter. In any case, it was necessary to conciliate Nesselborn, and he thought that he might thus "kill two birds with one stone."

Prince Dmitri's experience with the former French governesses of his daughters was unpleasant. His wife had abruptly dismissed them, and insisted on a thorough, competent

and accomplished German governess. The Prince had good reasons for satisfying his wife to the best of his abilities.

"Have you made up your mind, my dear Councillor, in regard to the governess?" asked the Prince. "I remember that there was one among the applicants whose references both as to character and ability were of the highest kind. She is, if I am not mistaken, an alumna of the Waldenburg Seminary, and especially recommended by the Director."

"But, does your Highness know the name of that lady?" Bögendorf handed, with this question, the testimonials to the Prince.

"*Parbleu !*" said the Prince. "Nesselborn!—Gertrude Nesselborn!"

"A niece of our unfortunate— —"

"*Maledetto !* Confound him!" swore the Prince.

"Your Highness knows that female education is my specialty, and the works I have published on the subject have unquestionably secured me the honor of being consulted by you. I had occasion to observe Gertrude Nesselborn on my circuits of inspection, and I must say that I was struck with her uncommon excellence. She has a talent for teaching of the very first order, and I unhesitatingly would recommend her appointment. It is true, the difficulty with her uncle may make her appointment impossible; for she is greatly attached to him. But might not this difficulty be adjusted? Your Highness will pardon me if I venture the remark, that the way your sons have treated one of Nesselborn's teachers, may lead to serious consequences if rigidly investigated. This teacher is Theodore Waldner, a young man whose fate, some years ago, created the greatest excitement all over the country."

"I recollect," said the Prince, "a story like that of the man with the iron mask—*Mais*—"

The Prince suddenly stopped, the course of his combinations having led him to Villa Wolmerode. "*Qu' est ce que me revient !*" he exclaimed.

"Let us not touch that idle talk—"

"*Superb ! superb !* Mrs. de F——; *mais*—continue if you please."

"That talk had no palpable foundation—no evidence whatever."

"Of course, of course! How could this Baroness de Fernau—a lady who—"

"Mr. Nesselborn was the first educator of this unfortunate youth. This accounts for the warm interest he takes in him, even if he were not a teacher in his institute. The public would be with him, if he should sift the matter, and the minister—your Highness will understand—"

"Why, what do you mean?"

"I think, indeed, Nesselborn ought to receive a pretty severe lesson—for instance, a severe warning, and the refusal of his request to have the title of Professor conferred on him. But beyond that—be generous, your Highness, and let justice be tempered with mercy!"

At this moment another card was handed in. It was that of Dr. Staudner. "A physician ought never to be refused admittance," said the Prince, and Staudner was ushered in accordingly. Bögendorf's and Staudner's eyes met with a glance of significance. In order to let Staudner see the object of his visit, Bögendorf said to the Prince, "I hope, then, you will be fair and moderate, your Highness!" With these words he bowed himself out of the room.

Staudner immediately perceived Bögendorf's drift. "Moderate?" he thought. "No, not at all!"

When the little bald man had taken a seat opposite the Prince, he adjusted his blue eye-glasses, and made a preamble to introduce the subject which induced his visit.

Nesselborn's name was scarcely mentioned, when the Prince burst out in anger. But Staudner, who knew his man, engineered with greater cunning than even his friend Bögendorf. He acknowledged that the "aspiration" of the young Nesselborn ladies to the rank of princesses Porphyrogenitus was so ludicrous as to qualify them for a lunatic asylum. But he excused these "day-dreams" with "the extreme of passion." "I can assure you," he added, "both young ladies are respectable! They have been admirably brought up. It is only their lively temper, transmitted to them from their mother, that gives them an appearance of coquetry of which their hearts know nothing."

"I am glad to hear it. You are a bachelor, Doctor; why do you not secure one of these treasures yourself?" was the impertinent reply of the Prince.

"Your Highness never had a conversation with the girls," answered Staudner undaunted, and controlling any symptom of having taken offence.

"I would abuse them roundly if I should happen to meet them."

"That would be a matter of regret to every one to whom these lovely—— But what is the use of talking? Tastes *will* differ. These girls have a peculiar charm of their own, a quality which is as rare as interesting, a tendency——"

"To accept presents, I believe!" interrupted the Prince. "*C'est très commun!*"

"Not at all, your Highness. It is something very different. You know that species of parrots, the so-called inseparables? These birds cannot exist if they are separated from each other. The same is the case with the Nesselborn girls, both beautiful, with fiery eyes and Southern complexions. But their most remarkable quality is this peculiar attachment by which either of these girls will completely forget herself in behalf of the other. There is the most absolute absence of all kind of jealousy or envy between them."

"Fortunately," remarked the Prince, "I had *two* sons."

"If your Highness," said Staudner, "would take your sons away from the city, they would soon forget that romance."

"So I hope," replied Prince Dmitri. "I will take them to the military school in St. Petersburg, and since the girls, as you seem to imply, are not sentimentalists——"

"Nothing of the kind, your Highness; they are already aware of their folly. But it will be necessary that they leave their father's institute, and look out for positions as companions or governesses in some family of high rank. For such a position they are eminently qualified both by thorough education and elegant breeding. Your Highness is going to engage a governess for your daughter. These girls are virtually one only—one soul in two bodies. Now, if you would try them in this capacity? I am sure——"

"Do you mean to jest with me, Doctor?"

"I was never more serious in my life. You shall see the girls! And believe me, Nesselborn is a noble, high-toned gentleman. But his institution has rather got ahead of him. You would find an ample reward in your own conscience if, after teaching him an earnest lesson for his own good, you would lend your own hand to save the man. This can only be done by removing his two daughters, who must always be a discordant element in a boys' institute."

"Well, I shall consider the matter; but—"

"I must confess, your Highness, that the girls are waiting in the parlor, and if you have no objection—"

"Why, I really believe I must make the acquaintance of your inseparables, but—"

"I have to call on some patients in the neighborhood. In about half an hour I shall call again to take the ladies home."

The result of Prince Dmitri's interview with Levana and Adelgunde was quite surprising.

Lienhard Nesselborn's application for the title of a royal Professor was not granted. But beyond this nothing happened that was humiliating to him. His institute was allowed to go on with all its former privileges. Even the two princes did not go to St. Petersburg, but returned to the institute, after giving a solemn pledge of good conduct. Levana and Adelgunde accompanied the Prince to Bucharest, and were introduced there as the instructresses of his daughter, the Princess Axinia.

The leave they took from their mother was not quite as heart-rending as was anticipated. Their father had written some lines in their albums which showed the traces of his tears. Some days later young Waldner, after fully recovering from his injuries, returned to the institute. When he entered, the princes and their wild fellow-students were deeply engaged—or affected to be—in geometrical drawing, cube-roots, equations of the third degree, and the intricacies of the French participial construction.

Gertrude was installed in the domestic management of the institute. She had readily yielded to the wishes of her uncle without showing any feeling in regard to her cousins obtaining the position which she herself had solicited.

NEW JERSEY—"A FOREIGN COUNTRY."

THE origin of the allusion to New Jersey as a foreign country is said to be as follows:—"After the downfall of the first Napoleon his brother Joseph, who had been King of Spain, and his nephew, Prince Murat, sought refuge in this country, and brought much wealth with them. Joseph Bonaparte wished to build a palatial residence here, but did not desire to become a citizen, as he hoped to return to Europe. To enable him, as an alien, to hold real estate, required a special act of the Legislature. He tried to get one passed for his benefit in several States, but failed. He was chagrined, especially because Pennsylvania refused. After this he applied to the New Jersey Legislature, which body granted both him and Murat the privilege of purchasing land. They bought a tract at Bordentown, and built magnificent dwellings, and fitted them up in the most costly manner. Rare paintings, statuary, etc., were profuse, and selected with great care, and the grounds laid out with exquisite taste.

Joseph Bonaparte's residence was perhaps the finest in America. Thousands of people from all parts of the country visited him and were treated courteously. He was exceedingly liberal with his money, and gave great impetus to business in the little town. The Philadelphians, finding that he had apparently no end of money, and that he used it to benefit business generally, regretted when it was too late, that they refused to let him locate among themselves, and, to keep up their mortification, would always taunt Jersey-men with having a king—with importing the King of Spain to rule over them—they were called Spaniards and foreigners on this account. But these taunts harmed no one, as the Jerseymen lost nothing by alluring him to settle among them, and thus "foreigner" jokingly applied to Jerseymen, has come down to us long after its origin has been forgotten, except by a few men of the past generation. Many years ago—during the reign of Louis Phillippe, we believe—both Bonaparte and Murat found they could safely return to Europe, so they sold out and returned.—*Newark Courier.*

SOME REFLECTIONS.

AS the AMERICAN EDUCATIONAL MONTHLY enters its ninth year, we are led to reflect that it is no light task to properly conduct an Educational Magazine. It may be easy to publish a periodical that is intended to amuse its readers. It is not difficult to chronicle victories and award praises. But, to edify rather than entertain; to point out omissions and to expose errors, is quite a different work. To decide between the conflicting claims of authors and publishers is a difficult duty. To examine and report upon the respective merits and demerits of school books and school systems, seems too often to be a thankless task. And yet all this is the true province of the educational editor, besides collecting from all sources dry facts and statistics, and arranging them in proper order for general use. Modest intelligence must be encouraged, and forward ignorance must be rebuked. An incessant warfare must be waged against quackery and charlatanism in school books, in school supervision, and in school teaching.

It must be admitted that the services required of us are multifarious and responsible. If we have performed them, with even partial success, we deserve to be congratulated. Of course certain authors and publishers will take exceptions to our rulings. Though worthy men may sometimes oppose our criticisms; yet we observe with pride that our example of candid criticism is being imitated in different quarters. We may see the day when the truth will, invariably, be told about books, especially about School Books.

The press everywhere has sustained us, and appreciative subscribers have encouraged us to go on in our fight against error in education. Strong endeavors to serve a good cause with fidelity may make some enemies, yet many steadfast friends will not be wanting.

EDUCATIONAL INTELLIGENCE.

BUREAU OF EDUCATION, WASHINGTON, D. C.
—The Secretary of the Interior, in his Annual Report, refers to the work of the Commissioner of Education, Gen. John Eaton, Jr., as follows: "The details of the report will show the vast amount of work which the Commissioner has performed, and I take pleasure in attesting the ability, fidelity, and energy with which he has administered the affairs of his office. It has been the design of the Commissioner to establish and maintain an intimate and constant communication with the various educational centers of the country; to seek and supply information; to distribute documents, and to pursue original investigations. In the course of official duties the Bureau of Education has received and sent about 2,000 written communications, has distributed about 12,000 printed documents, and has received many valuable accessions to its library. This sort of interchange is constantly and steadily increasing, and is already greater than the limited clerical force of the office can properly attend to, thus leaving very little opportunity for original investigation in its many interesting directions. Among the workings of the Bureau may be noted: *First.* The inauguration of a system of direct exchange of documents and information with foreign ministers of public instruction. *Second.* Visits by the Commissioner to the whole educational field in this country, especially in the South and on the Pacific Coast, for the purpose of personally acquainting himself with prominent educators, and the demands of the work to be done. *Third.* A great variety of original investigation, respecting orphanage, pauperism, crime, insanity, etc., in their relations to education. *Fourth.* The papers accompanying the report of the Commissioner comprise an abstract of State and city reports for the whole Union; a *résumé* of the progress of education in Europe, Asia, and Africa; a great number of statistical tables respecting public systems of States and cities, colleges, professional schools, and other institutions, and original articles on various educational subjects by universally acknowledged authorities."

THE INDIANS are spoken of by Secretary Delano as having made considerable progress in the arts of civilization as well as in their increased efforts in behalf of the education of their youth. "Without progress in industrial pursuits and in education," says he, "we cannot hope for any lasting good results from the new policy, and it should, therefore, be the first effort of the Government to act so as to encourage the Indian in those directions which will induce him to cultivate habits of industry, and foster a desire for mental and moral culture. It might be well to establish a system of compulsory education to such an extent, at least, as to withhold annuities from those individuals who refuse or neglect to avail themselves of the educational facilities. This principle was adopted with the Pawnees in the third article of the Treaty of 1857, and with good results."

ALABAMA.—During the scholastic year 1871, the cost of administering the department of education has been less than that for the year 1870, by \$42,535. There has been a corresponding increase in the number of pupils and the length of the school term. Whereas in 1870 the average number of pupils was 52,060, the number in 1871 is 107,666, an increase of more than one hundred per cent. The school term which in 1870 averaged two months and nine days, has increased in length of session thirty-five and a quarter per cent. This remarkable increase in number of pupils, both white and colored, and increased length of school term, has resulted in but small part from an increase of the school fund. With but $17\frac{1}{4}$ per cent. increase of the tuition fund, we find 106 per cent. increase of pupils, and $35\frac{1}{4}$ per cent. increase of school session. The results of the year exhibit the fact that the school fund of Alabama in proportion to its amount, and the population of the State, has taught more children, and for a longer time, than that of any other State in the Union, with but two or three exceptions.

CHEROKEE NATION.—A model Report is that of the Supt. of Public Schools, Mr. S. S. Stephens, made to the National Council, Lewis Downing, Principal Chief. In the space of ten small pages, he gives a sufficient amount of statistical information, notes the defects in the present

system, and suggests the necessary improvements. In the sixty schools, there are enrolled 2,249 pupils, the average attendance being 1,297. The School Fund amounts to \$596,141, and the fund for supporting orphans, to \$219,774. The Supt. advocates the establishment of Graded Schools, and the organization of a Normal School as essential in elevating the condition of education.

FOREIGN NOTES.—In ALSACE and LORRAINE the whole machinery of the Prussian educational system has begun to work with wonderful activity since the 10th of October, 1871. The government had to carry out a Herculean task. In the midst of the most trying political, social and commercial problems, which taxed the German statesmen to the utmost of their abilities, the Department of Instruction, in an incredibly short time, has been reclaimed from a chaos into a model of intelligent organization. There is one University in Strasburg, which is intended to be a rival of the most celebrated German universities, and nineteen Colleges in Strasburg, Metz, Colmar, Forbach, Saarburg, Mühlhausen, Weissenburg, etc. The Presidents of these colleges are, with one exception, Germans, taken from the literary notability of the whole country. Among the other teachers, about one half are native Alsations, the rest are Germans of the old provinces. The numbers of Protestant and Catholic teachers are about equal. Even Jewish teachers have obtained some appointments. In the common schools, which are fully organized in all districts, education is compulsory, and entirely taken out of the hands of the clergy.—If we compare, with these energetic steps, what has been done in FRANCE, where the condition of education is almost worse than a chaos, we find that the government has organized a new *military* school in Rouen, and that part of the French press has indulged in more or less earnest *talk* about education. It is *said* that in the *next* Assembly some laws concerning compulsory education will be introduced. That is about all.—RUSSIA.—The Emperor has sanctioned the proposal of removing the University from Dorpat to Wilna, as a measure likely to effect the complete Russification of the Baltic provinces. To hasten the accom-

plishment of this result, six thousand roubles have been placed at the disposal of the Baltic government to print official journals in the Russian language instead of the German.—

SIBERIA.—Two hundred, and fifty thousand roubles have been subscribed by Siberian capitalists for the creation of a University to be located at Tomsk or Irkutsk. The Czar is said to favor the scheme, which will probably not be delayed beyond this year.—CHINA and JAPAN.—The Chinese government has sent on thirty of its young men to be educated in the language and laws of our country, and will send thirty more each year. An appropriation of \$1,500,000 has been made to meet the expenses of the next ten years. Japan has already done much in this direction, about five hundred of the more advanced pupils at the Yedo Government School, having been sent to America, from time to time, to continue their studies in this country. Each one has an allowance of \$1,000 per annum to pay expenses.—In BADEN every child receives instruction; and in WURTEMBERG there is not a peasant, or a girl of the lowest class, or a servant in an inn who cannot read, write and count correctly. Every child goes to school, attendance being obligatory.—ENGLAND.—The *London Times* thinks that the National Educational League must be allowed the merit of announcing definite aims in decided language. Its object is to wrest the elementary education of the country from the hands in which, for the most part, it is now lodged, and establish in its place a uniform system of State education, independent of all religious bias, unsectarian, invariable, compulsory, and if possible, free.

THE immense magnet, recently constructed by Mr. Wallace at Ansonia, for Prof. Henry Morton, of the Stevens Polytechnic Institution at Hoboken, consists of eight metallic spools, $21\frac{1}{2}$ inches in diameter by $9\frac{1}{2}$ inches long. Its total weight is about 16,000 pounds, nearly twelve times heavier than the celebrated magnet constructed by Prof. Henry, of the Smithsonian Institute at Washington. Prof. Mayer has estimated its lifting force at fifty tons, or five times more powerful than that used by Profs. Faraday and Tyndall in their famous researches and experiments.

CURRENT PUBLICATIONS.

WE place Mr. Soule's book of *Synonymes*¹ at the head of works of this kind; first, because its vocabulary is so full and complete, and second, because it has been prepared on a simple and time-saving plan. The author is favorably known to leading educators in this country, as the assistant editor of Worcester's *Quarto Dictionary*, also from an elaborate *Manual of English Pronunciation and Spelling*, got up by himself and Mr. William A. Wheeler.

The present work shows careful research, and could not have been prepared without years of patient toil. The vocabulary is strictly alphabetical, and the inquirer is not referred, as in Roget, from one part of the book to another for the information he is in search of. The synonymous words which he seeks are presented at a single glance.

This work will not supply a writer with brains, but it will aid him very materially in presenting his thoughts. The typographical appearance of the book could hardly be excelled.

MR. THOMAS HUNTER has prepared a handy little volume entitled "*Plane Geometry*."² It is intended to render the study of the elementary principles of Geometry more simple and easy of comprehension: and perhaps it may fulfill the intentions of its author.

DR. WILLIAM SMITH has prepared a new edition of Dr. Hallam's "*View of the State of Europe during the Middle Ages*."³ The representatives of Dr. Hallam considered that great injustice had been done to his literary character by the reprint of the obsolete edition of 1816, after it had been superseded by the author's own careful revision, and had been enriched by many supplemental notes, which added one-third to the original size of the work. Hence this work, with several important additions by the editor, has been added to Harpers' Student's Series.

¹ A Dictionary of English Synonymes, and Synonymous or Parallel Expressions, designed as a practical guide to aptness and variety of Phraseology, by Richard Soule. Boston: Little, Brown & Company, 1871. 456 pp., 12mo.

² 3 Harper & Brothers, Publishers.

TO MISS BURDETT COUTTS, a leading member of the "Ladies' Humane Education Committee," a very handsome and interesting volume has been dedicated, by F. O. Morris. It is entitled "Dogs and their Doings,"⁴ and is a most appropriate presentation book for the young. It is thoroughly illustrated.

"LIFE AND LETTERS OF CATHARINE M. SEDGWICK,"⁵ edited by Mary E. Dewey, is an important addition to American Biographical Literature. The work is embellished with excellent portraits, and with a picture of the Sedgwick residence.

DR. CALVIN CUTTER has lately sent out a "Second Book on Analytic Anatomy, Physiology and Hygiene, Human and Comparative."⁶ The book has numerous illustrations, and is thoroughly well made in every respect. No man has done more than Dr. Cutter to popularize this important study, and introduce it in our schools of all grades. We are glad to observe that he keeps alive to the subject, and improves his books as the times require.

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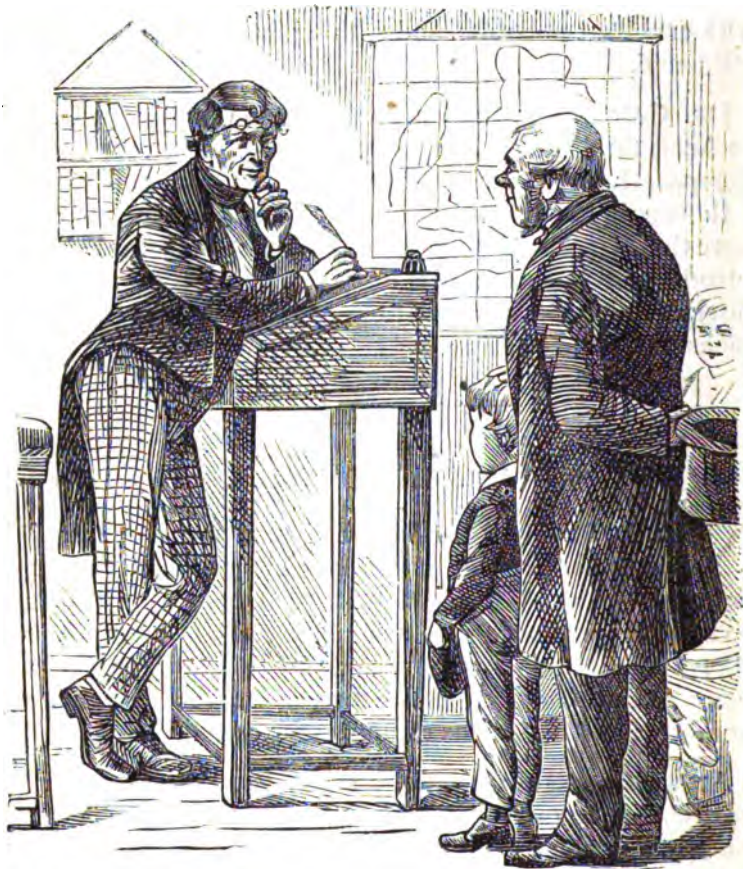
NECROLOGICAL.—We shall commence in our February number, as usual, the biographical notices of eminent educators deceased in 1871. Death has made great ravages in our profession and among its friends. A considerable number of College Presidents and teachers at home and abroad, have fallen by the way, leaving precious memories and illustrious examples for us to follow.

AN opponent of the public school system insists that if you teach a boy to write he is much less likely to make his *mark* in after life.

PROF. J. DORMAN STEELE will discuss next month in these pages the important question, "What are we going to do about it?"

THE February number of the *AMERICAN EDUCATIONAL MONTHLY* will contain a revised list of the *State and Territorial School Officers* of the United States.

"MORE PENNSYLVANIA IDIOMS" will appear in our next, by the same writer who favored our readers, in 1870, with a very interesting and instructive paper on Pennsylvania Idioms.



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February, 1872.

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 129—Piano, Singing, Drawing and Painting; \$800.  
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 133—Ed. Vt.; Piano, Organ and Singing; E.: \$300 and home.  
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 135—Waterford Acad.; 3; Piano, Organ, and Singing; P.: \$400 and home.  
 136—Lyons Musical Acad.; 4; Piano, Organ, Guitar, Singing, French and Object Teaching; M.: \$600.  
 137—Ed. Profs.; 8; Piano and Singing; E.: \$600 and home.  
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 507—Ed. Troy Sem.; 3; Drawing, Painting and French; E.: \$500.  
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- 53—Bowdoin; 3; Eng., Class., Maths., French, German; \$1,200.
- 54—Madison Univ.; Eng., Class., Maths.; B: \$800.
- 55—Pub. Sch.; 5; Eng., Maths., B'k-keep.; C: \$1,200.
- 56—Williams; 2; Eng., Class., Maths., Book-keep.; P.
- 57—Troy Univ.; 10; Eng., Nat. Sci., Maths., B'k-keep.; M.: \$1,200.
- 58—Brown; Eng., Class., Maths., B'k-keep.; \$1,000.
- 59—Wes. Univ.; 5; Eng., Nat. Sci., Class., Maths., B'k-keep., French, German; M.: \$1,400.
- 60—Haverford; 4; Eng., Class., Maths., B'k-keep., French; \$1,200.
- 61—Nor. Sch., Ohio; 4; Eng., Maths., Latin, Penmanship; \$1,200.
- 63—Ky. Mil. Inst.; 10; Engineering, Sciences, Drawing; \$3,000.
- 64—Yale; 10; Eng., Class., Maths., B'k-keep.; E: \$800.
- 65—Union; 1; Eng., Class., Maths., Nat. Sci.; E: \$800.
- 66—Middlebury; 10; Eng., Class., Nat. Sci., Maths.; B: \$1,200.
- 67—Iowa State Univ. and Göttingen; Nat. Sciences, Maths., Class., *German*, French, B'k-keep., Singing, Gym; M.: \$1,500.
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- 70—King's Coll., London; Eng., Class., Maths., Engineering, *French*, *German*, Drawing; E: \$1,500.
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- 100—Stuttgart; 10; *German*, *French*, Drawing; Prot: \$800.
- 101—Dessau; 15; Piano, Organ, Singing, *German*; Prot: \$1,000.
- 102—Berlin; 10; *German*, *French*, Class., English branches, Singing, Violin; \$1,000.
- 103—Munich; *German*, *French*, *Spanish*, *Italian*, Classics, Maths., History; P.: \$1,500.
- 104—Naples; 20; Singing, Harmony.
- 105—Berlin; 30; Maths., Nat. Sci., *German*, Mil. Tactics; L: \$1,000.
- 106—Jena; 24; Classics, *French*, *German*, Hebrew, Maths., Piano, Singing; Morav.: \$1,500.
- 107—Brussels; 3; Piano, Harmony.
- 108—Bordeaux; 20; *French*, *Spanish*, Drawing, Painting, Penmanship, Class.; C: \$1,000 and home.
- 109—Switzerland; 1; *French*, *German*, *Spanish*, Class., Piano, Organ, Singing; P: \$700.
- 110—Vienna; 2; *German*, *French*, *Italian*, Class., Maths.; C: \$800.
- 111—Princeton, Bonn, Paris; German, French; P.: \$1,500.
- 113—Palermo; Piano, Singing.
- 114—Carlsruhe; 4; French, German, Class., Mech. Drawing; Cl.: \$1,600.
- 115—Basle; 5; *French*, *German*, Classics, English branches; L: \$1,000.
- 116—Jena; 5; *French*, *German*, Latin, Piano, Organ, Singing; L: \$1,000.
- 117—Germany; 15; *German*, French, Piano, Organ, Singing, El. Violin and Guitar; Prot: \$800.
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- 120—Berne; Classics, *French*, *German*, Hebrew; Prot.

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# AMERICAN EDUCATIONAL MONTHLY.

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FEBRUARY, 1872.

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*"WHAT ARE WE GOING TO DO ABOUT IT?"*

THE question of free education no longer remains to be decided. The only really unsettled point is as to the mode, not to the fact. Of course there are influences opposed to free schools, opposed to higher education—whether public or private—opposed to the fundamental principles of free government, opposed to civilization itself. But these will probably always remain, and the battle for the preservation of the good must be waged to the end of time. Thanks to the leaven cast into American society by the stern, wise souls who planted it, we can have perfect confidence in the result. The idea of popular education is a foundation one, and needs not to be re-laid by this or any coming generation. In the meantime, the development of this idea calls for our most earnest consideration. Senator Wilson remarked in a late speech, that, "notwithstanding the admitted advancement of the cause of elementary education, there still remains a lamentable lack of men and women suitably educated for the various duties and dangers, responsibilities and emergencies of actual life." The *Chicago Tribune*, in the course of a caustic article, wherein it states that "the average schoolmaster counts as nobody in the world and is reckoned out on all practical matters," ironically asks whether "he is indeed the perfected product of his own work?"

We may reply that such criticisms are one-sided and should not influence us. It seems to me, however, wiser to carefully weigh them. They come not from the enemies of education but from outsiders, who look calmly upon our work and, perhaps, estimate it at its true worth. Upon all sides we are sensible of this pressure upon us and our systems of education. Nay, more, in our own hours of thought such questions come home to us with tremendous force. We say, I know, that the object of our education is discipline. These studies and methods are not exactly such as will be of the greatest value to our pupils when they commence business for themselves, but we aim to develop mental acumen and strength. When they go out into life they will apply this force to practical ends. But this answer does not satisfy the practical men who support schools, neither indeed does it quite satisfy our own minds. We regulars look upon Commercial Colleges somewhat as thorough-bred physicians do upon quack doctors and patent medicines. Yet are not such intensely, even if it be only superficially, practical schools a protest against, a revolt from, our profoundly unpractical ones?

I would name a few points of criticism which have arisen in my experience from an inside view. They may be well taken. If so, I have no remedy to propose, but only ask in the modified language of an illustrious, though lately deceased patriot: "What are we going to do about it?"

- (1.) In our graded schools we have a Procrustean bed wherein we lay every pupil and cut him off or stretch him out to the required length. We make little, if any, distinction, where nature has drawn lines deep and wide. A bright pupil is given no longer lesson than a dull one. A boy of slow apprehension must go through a course of study in a specified time or be disgraced by falling behind his class. Yet we know that that kind of intellect would be injured by rapid work and is adapted only for steady plodding. The whole effort of the system is to throw him out of his legitimate sphere—to make a racer out of a good plough horse. How many such pupils feel disheartened because they cannot be what God never designed them to

be—quick-witted, brilliant students. On the other hand, how many rapid, bright ones become restive under the necessity of keeping pace with dull companions! Ought not the pupil to be superior to the system rather than the system to the pupil? Are human souls of so little value that we can afford to dwarf even one? Should not our schools present the same diversity that God has implanted in the mind?

(2.) There are many young persons who, from the force of circumstances, have not had the opportunity of early training, but now desire to secure an education. The elementary branches are pursued only by little children, with whom their pride will not permit their studying. Moreover, from the very maturity of their minds they can go faster than the younger pupils, study differently, and need dissimilar training. There are many who, from sickness or other causes, fall out of the regular course, and some who cannot enter at the beginning of the year, and so, being behind their classes, stay out entirely. Some are deficient in only a single study, and yet must be put into the mill and ground out regular as if they were deficient in all. Many desire to fit themselves for some particular avocation, and have no leisure for a broad culture. Many, too, feel the need of a generous education but have no time to go the round of a full course in the slow, accurate way our graded system demands. For example, they wish to pursue geography but cannot spend a whole year on the map of the United States; or, if it be arithmetic, they find that the class would exhaust their whole time for schooling, in percentage or some other single topic. We have laid out a system which covers the whole course of ordinary study, and gives to each part a time in which it shall be mastered. I believe the plan an admirable one. There are no class of pupils elsewhere to be found as are turned out by these treadmills of discipline. But here is a large number of persons for whom—I say it with deep regret and hesitation—the old-fashioned district school or academy, where system was nothing and individual advancement everything, would be vastly better. In getting the good things of the new, must we let go the good things of the old? If the free school

system is to be *the* system of the future, it must meet all the demands of the people. It must furnish instruction suited to the wants of every person who desires an education. If not, then it must be supplemented by other methods, and yield its present proud boast that it is to supplant all other systems.

(3.) By a kind of hot-house forcing, children are crowded along at the expense of their physical and mental strength. Their minds are prematurely developed and their bodies weakened and dwarfed. "The murder of the innocents" is becoming a terrible and every day verity. Children reach the higher branches of education before they are old enough to appreciate or grasp them. To meet this want, knowledge must be diluted and milk prepared for babes who leave school before they can digest strong meat. We regret the feverish haste of the day. People go too fast. Yet our schools foster this very state of things. Children graduate from the high school, and even from the college, at an age when they might well be in the common English branches. Their brain-growth has only just reached the point where these studies are of real value. I have organized a class for such pupils, and they have repeatedly told me that they seem to themselves never to have pursued those studies before, so wide and interesting is the field now opened before them. Yet they passed the Regents' Examination, with credit, three years before. Does not our present system need to have the brakes put upon it?

(4.) Much of the instruction given, even in practical studies, is not practical. We cannot deny Senator Wilson's statement. Arithmetic is taught, but often not the methods accountants use. Will our pupils carry into business-life the modes of analysis taught them in the school room? Will they ever solve a problem according to the cumbersome, roundabout solutions of our mental arithmetic drills?

Why is it that so many pupils, when they see a problem outside of the book, have to ask, "What rule does it come under?", or have no confidence in the result they obtain, unless somebody tells them the true, correct answer? We teach grammar and rhetoric, but do our pupils learn to use good language and write correctly? We spend days in

parsing with those who cannot even compose and direct a business letter in a business-like way. When a boy passes out of school into the world he suddenly finds that his scholastic learning is of no especial value where he is now,—that what would help him most in getting on in life was left out of his school course, and that he has yet to learn everything when his education is facetiously said to be finished.

It is easy to fall into a rut and run in it. We can get out only by a terrible creaking of axles and wrenching of joints. The simplest way of teaching in the world is to have a cast-iron system and fit everything to it. If, perchance, anything is tough and gnarly and refuses to be fitted, then out with it on the refuse pile. It is difficult to make exceptions, to take the measure of childhood and cut its clothes to fit. Ready-made clothing saves a deal of measuring and waste. But the teacher works in immortal souls. He decides, in a degree, the fate of multitudes whose characters he shapes in outline. Success is vital. School is nothing as an end. Real life is everything. Every study should be so vitalized and informed by practical, business life, that it shall be not only a preparation for it, but somehow a part of it. In our free schools pure and scholarly training, however valuable in itself, is not an education of the people, for the people and by the people. In "the good time coming" our present methods of instruction must lose somewhat of their scholastic character, somewhat of their rigidity, and, becoming more practical, admit also of more individuality; while that "vital knowledge," as Herbert Spencer calls it, by which alone our nation has become renowned and prosperous, will no longer stand trembling as a suppliant asking admission into our curriculums of study, but will occupy the place now occupied by "dead formulas." To be educated will then mean to be fitted for life, not as now to be ready to begin to be fitted.

Fault-finding is a thankless task. It is easier to tear down than to build up; to criticise than to amend. Yet the faults of our system of education can only be discovered by careful, thoughtful scrutiny. Rest assured, they will be detected, if not by its friends, certainly by its enemies. It is far better that we find out and eliminate them from within,

than that they should be attacked and violently eradicated from without, perhaps to the fatal injury of the system itself.

J. DORMAN STEELE.

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*MORE PENNSYLVANIA IDIOMS.*

ABOUT a year and a half ago I was permitted in this magazine (*MONTHLY, August, 1870*) to put on record "Some Pennsylvania Idioms;" and, the article having the luck to attract some attention, a number of interesting and helpful comments were either made publicly or brought to my private notice. In the meantime, too, I have noted words which had previously escaped me, and to-day find enough material accumulated to warrant, perhaps, a second article on the same subject. A writer ("T. S.") in the *Nation*, of August 4, 1870, states that many of the words which I ascribed "to the Scotch-Irish settlers of a certain portion of the Susquehanna Valley [but not to them exclusively], are by no means peculiar to that region," and that he has been familiar with them from his youth up, "in Philadelphia and in Burlington, N. J., both settled in great part by English Quakers." It is, indeed, not the least interesting feature of the correspondence evoked by my article, that testimony is offered to a much wider usage of certain of the words and phrases recorded than I, at that time, had any conception of—always excepting the Old-Country usage, which I knew from a pretty thorough search of the dictionaries, though I did not take the pains to indicate this knowledge in any other way than by giving the true spelling of mispronounced words. For the convenience of those who may refer to my former article, I shall follow the order there observed, reserving, till the close of my retrospect, some fresh instances of the speech of our forefathers.

A correspondent ("T. C. D.") who was born and "raised" in Wayne and Union counties, Indiana, and the adjoining counties of Ohio,—a district settled by emigrants of the poorer class from Virginia and North Carolina,—writes that harvesters there were well acquainted with the forenoon



and afternoon *piece* or luncheon. In a humorous article in *Lippincott's Monthly* for November, 1870, "Among the Crackers," the word *mammoth* (pronounced *mommick* or *mummick*), to hack or mangle, appears in a new form :

" ' Wa'al, now, Cap'n,' said he reflectively, ' you see thar's a pow'ful heap o' damage done ! Thar's hills o' co'n an' rows o' taters—no, I mean hills o' taters an' rows o' co'n—completely *mommoxed* an' not wuth a durn. Thar's the trouble o' splittin' all that thar wood. Wa'al, it's hard tu say.' "

Prof. Schele de Vere, in his recent volume, "Americanisms," has the following (p. 616) :

" *Mammoxed* means, in Southern and Western slang, to be seriously injured. The origin of the term is not very clear—if it ever had a legitimate pedigree outside of Shakespeare's (?) *mummocked*. ' He was right smartly *mammoxed*, and at first we thought he was done for, but the damage wasn't very great, after all.' ( ' With the Comanches,' 1867.) "

Under *mammoth*, noun and verb active, Worcester refers to the usage of Herbert and Milton. "*Brash* [sick turn] I have met with amongst farmers in some parts of the interior of Pennsylvania, not in the city (T. S.)." " When we have a little *brash* we are slightly ill ; when a man is *brash*, he is crusty ; when a piece of wood is *brash*, it is easily broken (T. C. D.)." "*Cotbetty*, not *cot*, was what our old cook called us when we bothered her in the kitchen—perhaps *quean* had too opprobrious a meaning, and *betty* was simply feminine without being necessarily bad (T. S.)." " We sometimes have *infarcs*," writes T. C. D. " These mean not so much the home-bringing of the bride as the attendant feast, mirth, dancing, etc., by the invited company. A ' regular *infare*' consisted of all these things. The custom of ' making an *infare*' is fast dying out. Those who were invited to the wedding were always considered as invited to the *infare*." " The word *infare*," writes Lieut. W. S., " I first heard used in the sense you give it in Anderson county, and subsequently in Edgefield and Barnwell counties, South Carolina. The word was used by the educated portion of the people, and appeared to have as firm a hold in their speech as the

word 'tote.' Can the use of the word in South Carolina be traced back to the same class of people who used it first in Pennsylvania?" Schele de Vere uses the word only as synonymous with "installation" (of a minister). "*Flit*," writes the Rev. "J. M.," himself of Scotch-Irish descent, and born on the Pennsylvania border, "is a pure Saxon word. Applied to removing from one domicile to another, it varies but little from its general meaning, which is, to pass without observation. A 'moonlight *flit*' is a common phrase in Central Pennsylvania, and explains itself; but *flit*, to express the ordinary act of 'moving,' is used in a secondary and careless sense of the word."

"You conjecture," writes the Rev. "J. B. H.," who came lately from the West to the East, "that *hippen* may be 'hip-band,' but it is simply 'hipping'—*i. e.*, something for the hips; and the final *g* is elided precisely as in *whippin'*, *runnin'*, *fishin'*, etc. I have heard '*hipping*' a thousand times. Wherever district schools of the modern kind are introduced into the older regions of Ohio, Indiana, Illinois, etc., the first school girls learn to put on the *g* in all this class of words; and when they come to marry and have babies, they all say '*hipping*.' After that, when the old simplicity is replaced by ostentatious refinement of speech, the ladies all say 'diaper' for the same thing." It would seem as if the word might have had a Southern origin. "*Hippen*," says T. C. D., "more rarely 'clout,' designated a certain portion of an infant's wardrobe; this only among the pioneers. The modern term is now in use." "We yet measure the depth of puddles of water or mud by the phrases '*over shoe-mouth*' or '*over boot-top*' (T. C. D.)." "*Meeching*, more rarely *miching*, still survives here in the sense in which it was used by Shakspeare (skulking), while in England it has become obsolete (Schele de Vere)." The Pennsylvania signification, it will be remembered, was playing truant. "*Anan*, so constantly met with in J. F. Cooper's novels, is now-a-days heard only in New Jersey, and occasionally by old-fashioned people (Schele de Vere)." "*Nan* was not so infrequent when I was a boy, but it has lately become obsolete, or very nearly so (T. S.)." "*Anan* (not *nan*) is a corruption of *anon*, a genuine Saxon word. In its modern and local use, it

always expresses a request that a remark made, or question asked, or command given, be repeated: as an Englishman would say, 'I beg your pardon, sir?' (J. M.)." "*Belligods* (pronounced *belliguts*) was a term much in use among the old Puritans to denote articles of luxurious living, particularly those for the gratification of the stomach. It has an evident allusion to Phil. iii. 19; and its use in that sense may be seen in their sermons and religious writings *passim*. 'Taffy,' at one time the most fascinating to children of all eatables, naturally got the benefit of this epithet *belligods*; which those extremely good people, had they lived in our day, would have probably flung at our ice-creams, effervescing waters, and sherry-cobblers (J. M.)." "*Bellygods*," says T. S., referring to the foregoing derivation, "I swallow without hesitation. I heard, only last evening, a sort of confirmation of the etymology, in the pronunciation of the last syllable by an old-fashioned Delaware man, who was quite shocked by the conversion of *d* to *t*. It is of no importance to us now, unfortunately, but I may remark that it is not precisely 'toffy,' but a kindred sweet."

"*Saddy* is pure Philadelphian, though I never saw it spelt before. I remember once asking my mother what it meant, and her reply, 'save ye,' but I have since learned that the more plausible an etymology is, the more likely it is to be false. Possibly the '*salve præceptor*' of the schoolboy had something to do with it—we stuck to our Cordery pretty late in this slow place. If '*salve*,' however, was generally a word of salutation or of parting, yet it sometimes did have the effect of a 'God bless you,' as to one sneezing, for example (T. S.)." "*Saddy*, *saady*, or *saudy*, is possibly a compound of the French *sauve-toi*. But how it has slid into the secondary meaning of 'thank you,' it is not easy to explain. I have not known it used except by New Yorkers [!] and I suspect its origin is to be looked for in the Dutch or Danish language (J. M.)." "*Saddy* I have tried hard for several years to trace. It was used in Virginia a hundred years ago. I have long thought that the *dy* or *ddy* is 'to you' or 't'you,' modified in rapid pronunciation. I have looked for it in the old English writers, where, as you know, nearly everything is to be found, but so far my search is unsuccessful (J. B. H.)."

The word *fash* I find in the following extract from a recent English work: "The Brownies," by Juliana Horatio Ewing (London: Bell & Daldy, 1870). The story is of the North of England:

"He had always been used to be waited upon, and he couldn't *fash* to look after the farm when it was his own." Writes J. M.: "*Through other*, to denote confusion, or, as we say, with less elegance, higgledy-piggledy. Whether this phrase is a corruption of the Scotch *a-throwther*, or the latter a corruption of *it*, I leave others to decide. But there is no mistake about the expressions being synonymous. There are several instances of it in Burns, and particularly in his Ode to Scotch Drink:

" 'They canna bide the stink of powther:  
But, skelp! a shot! they're aff *a-throwther*,  
To save their skins.' "

"You are quite right in making A. P. stand for the original maker of the cakes. Ann Price, or Page, or Palmer (the best authority, perhaps, for the last), who first sold *apees* at her cook-shop in Philadelphia, stamped them with her initials—hence the name. So my grandmother told me, but I can't recollect the last name. A correspondent in the *Historical Magazine*, Vol. v., p. 93, says that Mrs. *Palmer's* shop was in Chestnut street, between Second and Third streets, and he is quite sure that she was A. P. (T. S.)."

"*Bunty* signifies squat in stature or short, applied both to men and animals; and sometimes to inanimate objects. Men are sometimes nicknamed *bunty* (T. C. D.)." "In some parts of New England they say *fautty*, to express contempt, as the Pennsylvanians say *footy* (J. M.)." *Harper's Bazar*, of August 6, 1870, re-produces a cut from a comic English journal with this as a part of the legend: "Why, we've got another little chap at 'ome as this one 'ere ain't even so much as a *patch upon*!" Compare this with *patchin* in my former article.

"To *sock* is certainly 'to hit with a ball,' and is the only single word in use in these parts, as far as I know, to express this action (T. S.)." "The school-boys, to this day, play a game of ball which they call *sock*. They often *sock* each other with various school-boy missiles (T. C. D.)."

I am indebted to J. M. for the following additional observations. "*Aucnt*, in relation to; and its compound *fore-ament*, corrupted into *fornenst*, to signify opposite, over-against; are words peculiar to old-fashioned Scotch-Irish people in Pennsylvania. Also *you-ones*, pronounced *you-uns*; which was an attempt to pluralize the second person of the pronoun when *you* began to be used indifferently for *thou*." This compound reminds us of the Southern form of "yonder" and "yon," whose use is well exemplified in the following stanza, from an amusing poem in the Macon (Ga.) *Telegraph* :

" Five years glid by, and Brown, one day,  
(Who got so fat that he wouldn't weigh,)  
Was a-sitting down, sorter lazily,  
To the bulliest dinner you ever see,  
When one of the children jumped on his knee  
And says, ' *Yan's* Jones, which you bought his land.' "

Some of the words peculiar to T. C. D.'s locality are worth notice here. "An indefinite, large number of anything is 'lots' or 'heaps' or '*slathers*;' in the language of children, '*lots and gobs*' [I have heard this last from a Pennsylvania-Dutch woman]. We never have pails, but use 'buckets;' our wagons never have whiffle-trees, we use '*double-trees*' and '*single-trees*' instead. Our buggies have no thills, but 'shafts.' Instead of going in a diagonal direction, we sometimes go '*cat er-cornered*' [compare the *cat-corners* of the checker-board], sometimes '*cat-er-nampus*,' sometimes '*ca-slunch-ways*.' "

The additions which I have now to make to my former list are few, but (like some of their predecessors) they will, perhaps, serve to perplex etymologists.

*Sprig*, for a brad-nail, used by my Pennsylvanian associates, is new to me as a New Englander, but doubtless familiar enough to others. *Throng*, as an adjective—*e. g.* "The room was very *throng*"—is a relic of local English usage. But who can explain for me the etymology and right spelling of these words, in use in Pennsylvania less than half a century ago—perhaps still in use?—*Faze*, to graze, to hurt. "Nothing *fazes* me." *Boo*, euphemistic once for a louse. *Fogo*, disorder; also a mal-odor—*e. g.* "My! what a *fogo*

in this room!" *Hob*, in the expression: "It plays *hob* with your time"—*i. e.*, plays the deuce with it; eats it up. Perhaps the last is not obscurely derived in meaning from the "*hob*" (sprite, fairy,) of hobgoblin. Finally, the word *like* (verb neuter) in the phrase: "What makes your dress *like up* so?" in use in Philadelphia, and, I believe, also in use in England in the conversation of the well-educated—is it a possible corruption of "hitch?"

P. CHAMITE.

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THE LUCIFER MATCH.—The invention of our present lucifer match was great because it was so small, and it now turns out that the production of this most useful, but at the same time most dangerous fire-work, was due to a happy thought which flashed through the brain of Mr. Isaac Holden, who so terms the idea in his evidence before the Patent Committee. Mr. Holden had to rise at four o'clock in the morning to pursue his studies in chemistry, and experienced the gravest inconvenience from his tedious efforts to obtain a light from flint and steel. He was giving lectures at the same time to a very large academy. He goes on to say: "Of course, I knew, as other chemists did, the explosive material that was necessary in order to produce instantaneous light; but it was very difficult to obtain a light on wood by that explosive material, and the idea occurred to me to put under the explosive mixture sulphur. I did that, and published it in my lecture, and showed it. There was a young man in the room whose father was a chemist in London; he wrote to his father, and lucifer matches were issued."

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MR. TILGMAN's plan for grinding hard surfaces by a blast of air charged with sand, is assuming a high importance in the arts. Some beautiful specimens of glass cut and ground in this manner were exhibited in the Institute Fair. A thin slab of marble may be carved in patterns the most delicate, and a picture may be photographed on glass and afterward etched as perfectly as if it were a most delicate engraving.

*HINTS ON DISCIPLINE AND SCHOOL EDUCATION.*

## THE MINOR PUNISHMENTS.

THE minor or "lesser" punishments are frequently and thoughtlessly used and abused by both parents and teachers. For these reasons we will take the liberty of considering them before proceeding to treat of the infliction of corporal correction, which is regarded by the vulgar as "the major punishment." We may observe, however, that children of a refined nature will always regard the latter as a "misfortune" far more easily borne than any of the "minor" or "moral punishments." Although reformation is the primary object in view when inflicting punishment of any kind, yet there is still a secondary object as aforesaid—namely, the detention of others from committing similar offenses. These objects are not unfrequently united, and then the motive for punishment is doubly just and proper. Legitimate authority, having praiseworthy objects in view, has an unquestionable right to inflict legitimate punishment if necessary to accomplish legitimate ends. It is so, in every country on earth, with all civil and military governments. It is so in the private family and should be so in the public school. No punishment, not legitimate, should be inflicted on any pupil; no unseemly or disagreeable epithets should be applied to him. He should never be scolded or abused, never be struck with the hand, and never subjected to any punishment partaking of "the nature of torture." The teacher should administer punishment with regret and sorrow—in obedience to the claims of justice and as an unpleasant duty. It should be administered in love and because the little sufferer is beloved; otherwise the teacher would be a tyrant and the pupil a martyr.

*Solitary confinement*, in a properly lighted and well ventilated room, is commendable as a punishment. It affords time for reflection, and if exclusive and effective, will seldom fail to produce repentance, contrition, and reformation. It will, therefore, be found an important aid in preventing the repetition of offences, as it will eradicate, or stem the evil at its source. But to be successful it must be effective—it

must be really solitary—the offenders must have no means of communication during its continuance. However, in the nature of things, it is better adapted for domestic than for school government. In school the confinement must necessarily be limited, but at home it may be prolonged if necessary. In the former case, the refractory pupils will feel that should they hold out a certain length of time they will be liberated unconditionally.

When the refractory pupil has been confined the allotted time, the teacher, if consistent with his convenience, should administer a “proper dose” of kind *reproof or admonition*, showing “the guilty one” how his conduct appears in its various phases—leading him to “see himself as others see him”—after which he should give some good and *friendly advice* as regards the future. The skilful teacher will seldom find this course to fail, even with the most obdurate, and will probably have the satisfaction of feeling, ere many weeks elapse, that he has converted another “prodigal.” Advice is better received in private than in public. Were reproof administered to a pupil publicly, a spirit of obstinacy might be developed in him, the manifestation of which would be anything but agreeable. Human nature is weak and inclined to be rebellious on such occasions. For this reason, if not from higher motives, reproof should always be administered in private. The very fact of regarding the pupil’s feelings so much as not to expose him in the presence of his companions, will tend to open his heart to receive better impressions, and may possibly stamp on his conscience the seal of contrition, besides increasing his love for the teacher personally.

*Reproach and ridicule* are highly objectionable as aids in school management. The latter tends to loosen the ties between the teacher and the taught; and the former, though not quite so objectionable, has much the same effect. Both should be avoided. They generally fall on the innocent, awkward, and sensitive pupils; whilst the idle and vicious, having no reputation to forfeit, are quite insensible or indifferent to their application and effects. An unskilful use of either reproach or ridicule could not fail to destroy the harmony of the best regulated school. It would mad-



den and degrade one section of pupils whilst it unjustly elevated the other, and fostered a tendency in the latter to regard themselves as much better individuals than the former. For these reasons the use of either reproach or ridicule is extremely dangerous, if not altogether pernicious and reprehensible.

*Humiliation*, as a means of school discipline, though a proper or legitimate punishment, should be used, if resorted to, with much caution and extreme delicacy. If not skilfully used it might possibly produce the same effects as ridicule, and be followed by disobedience and rebellion. Before resorting to it, therefore, the teacher should exhaust all other resources. Sometimes the public confession of an error or offense may be absolutely necessary; and, when made, it should be accompanied with a request for forgiveness. This confession, to condone the offense, should spring from a contrite heart. The confessor should be really penitent—really sincere; for, as Blair well observes, “Sincerity is the basis of every virtue. . . . Ingenuousness and candor possess the most powerful charms and carry an apology for almost every failing.” Indeed, the teacher should always encourage his pupils to frankly acknowledge their offenses, commending them to pursue the wisest, best, and most gentlemanly policy under the circumstances, namely—*a free confession with a suitable apology*. If they confess their offenses, regret their occurrence, and resolve not to be guilty of such conduct in future, the teacher may very properly overlook the past and agree to receive them into favor again. Should they not do so, and that the offense is a grave one, he will be justified in using every means at his disposal, even corporal punishment, to bring about the desired reformation.

#### CORPORAL PUNISHMENT.

We intended to treat in this article of corporal punishment as a means of School Government; but finding it impossible to approach the subject properly without first considering the so-called “minor punishments” and other collateral matters, we reserve its investigation till some future occasion. We may state, however, that the infliction

of any kind of punishment will only "make bad worse" unless its application be made effectual—unless it be continued until the offender is thoroughly subdued. With respect to corporal punishment, we would say that it should be used as seldom as possible—as a last resource, and only when other means of reformation have failed or would be likely to fail. Frequent and slight application would familiarize the pupils with its terrors, and tend to make them regard it with indifference, if not contempt. "All punishments (as Seneca observes) are either for amendment or for example, or both. . . . And the custom of offending will take away the shame of it." For this reason, if for no other, *punishments should be effectual, few, and far between.* Better never to administer punishment than that it should fail in design and soon need repetition. When to use the bridle and when the spur is a question whose solution requires much experience, considerable talent, and not a little critical discernment. Habits of order, industry, and implicit obedience promulgated and once adopted by the school, the teacher's appeals to higher motives than fear or force will never be ineffectual. He can then rule by the power of reciprocal affection, and rely for success on the finer feelings of our nature. These will carry conviction to the conscience through the avenues of the heart. But whilst insisting on the due observance, by his pupils, of all the rules and regulations of the school, he should be particularly careful not to infringe them himself. Calm and steady, gentle and mild, he should be consistent in all his actions—a standard of justice and honor, a model in manners and every gentlemanly accomplishment, a worthy exemplar of patient self-control: for, as Seneca well observes, "These are the best instructors who teach in their lives and prove their words by their actions."

G. V. LE VAUX.

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TRUBNER & CO. will shortly publish a Catalogue of Dictionaries and Grammars of the Principal Languages and Dialects of the World. There will be upwards of two hundred and fifty languages represented in this catalogue.

## DISCOVERY OF COFFEE.

TOWARD the middle of the fifteenth century, a poor Arab was traveling through Abyssinia, and finding himself weak and weary, from fatigue, he stopped near a grove. Being in want of fuel to cook his rice, he cut down a tree which happened to be covered with dried berries. His meal being cooked and eaten, the traveler discovered that the half-burned berries were fragrant. He collected a number of these, and, on crushing them with a stone, he found that their aroma increased to a great extent. While wondering at this, he accidentally let fall the substance into a can which contained his scanty supply of water. Lo, what a miracle! the almost putrid liquid was instantly purified. He brought it to his lips; it was fresh, agreeable, and, in a moment after, the traveler had so far recovered his strength and energy as to be able to resume his journey. The lucky Arab gathered as many berries as he could, and having arrived at Aden, in Arabia, he informed the mufti of his discovery. That worthy divine was an inveterate opium smoker, who had been suffering for years from the influence of the poisonous drug. He tried an infusion of the roasted berries, and was so delighted at the recovery of his former vigor, that he called it *cahuah*, which in Arabic signifies force. Thus coffee was discovered.

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AUTUMNAL tints of leaves are attributed to various causes. Some chemists determine that it is due to certain acids which are developed. Others aver that a diminished vitality in the plant causes the change of color; if this be true then we must assume that there is such a thing as a "vital power" in plants which presides over their cyclical changes, and this cannot but be accepted as true as far as our present knowledge goes. One phenomenon, however, must not be lost sight of, in seeking the causes of tinted leaves. Where ever one leaf overlaps another in the forest the under leaf will longest resist discoloration. The very form of the upper leaf may thus be stamped on the one beneath when the covering is only partial. This indicates that frost is a very important agency in the problem.

## SCIENCE IN PLAIN ENGLISH.

UNDER this heading I find in "Nature" an admirable article by William Rushton, of Queens College, Cork, which I propose to make the text of a few remarks upon the present condition of scientific education in the schools of the United States. Mr. Rushton admirably epitomizes the state of things in England in the following sentence: "Some schools have admitted science on about the same terms as dancing—that is to say, they give one or two hours a week to it; or, they may even admit it on equal terms with French, but it is generally made quite subordinate, and while classics are rewarded with high honors, science receives few distinctions." We must admit that what he says of English schools applies equally well to our own. Does anybody know of a preparatory school in the United States where instruction in science is given on a systematic plan by teachers especially fitted for the work, and with well-selected apparatus and judicious text-books, and where an equal value for excellence in science is given to pupils as for mathematics or the languages? There are doubtless some such schools, but it is my misfortune never to have heard of them. The truth is, there are few teachers. The custom in this world of studying everything else but the world we live in, which has been handed down to us from our ancestors, has precluded the possibility of anybody being fitted to teach the natural sciences excepting the few who have had the energy and the means to overcome every obstacle, and to learn something; and they are so rare that they are not to be had for ordinary schools. We are now in a fair way to acquire considerable knowledge of the planet Mars, its climate and physical condition; and it may be that we shall some day be favored by a visit from an inhabitant of that distant world. The arrival of such a visitor would be rapidly heralded over the land, and he would be introduced to our best society, to the leading men of education; and as he would doubtless be possessed of an inquiring turn of mind, he would have many embarrassing questions to ask. He might address the inquiry to the gentleman on his right

at the public dinner, which would be sure to be given to him, as to the composition of the crust of the earth; or he might ask what the glass windows were made of, and what form of light shone through them, or the water on the table and the air of the room might absorb his attention. If the respondent happened to be a University bred man, the chances are ten to one he could not answer a single question; he would be forced to say that the study of the language of a people formerly occupying a small portion of the globe had monopolized all of his time, and prevented the acquisition of a knowledge of any of the natural phenomena around him; he might in fact have more knowledge of Mars than of the earth. It is probable that our visitor would be slightly astonished at the ignorance of the best educated members of the community. I do not know that we are bound to prepare ourselves for the approaching visit, but the very suggestion of it ought to startle us a little out of our propriety, and make us review the course of instruction we have pursued for so many years. As long as the requirements for admission to college are left just as they are at present, all persons who expect to go to college must follow a prescribed course, or be found wanting. The teacher in a preparatory school knows that the pupil can attend only a certain number of hours, and to get up his task for admission to college nearly all this time must be devoted to classical studies. There is no time left for science, and it is not taught. This state of things has led to a violent controversy on the part of the advocates of the two systems, and the question appears to be no nearer a solution at the present time than it was many years ago. The advocates of classical training will not yield an inch of ground, and the scientists are equally firm. It is a pity that some compromise cannot be effected, as a knowledge of Latin and Greek is of great value to the scientific student, and ought not to be omitted. And as the classicists now have the colleges in their power, would it not be well for them to recommend a knowledge of language rather than of grammar, and a facility of reading generally instead of prescribing the precise number of chapters and verses? If the teacher of Chemistry, for example, were to insist upon the students

studying one hundred pages of Miller, fifty pages of Roscoe, two books of Gerhardt, the correspondence of Lavoisier, and the life of Berzelius, before presenting himself for examination, he would be looked upon as slightly deranged; and yet this is precisely what is done by our classical friends. A chemist can tell in half an hour whether the candidate is prepared to go on with a certain class; and he cares not how, when, or where the applicant obtained the knowledge. Not so our classical friends; they insist upon chapter and verse as if there were a charm in the prescribed number—and by so doing they do great harm to our schools. A friend of mine desired to put his son at a select school, and had a long conversation with the principal in reference to the studies he would have to pursue in order to fit him for college. The principal had the experience of thirty years in his calling, and knew precisely what was required. He produced his scheme of hours, and convinced the parent that in order to fit his son for college it would be necessary for him to devote a certain number of hours to the reading of a prescribed number of pages and verses of Latin and Greek; and to do this no deductions could be safely made. He showed that the average attendance of boys was about 6,000 hours, and by assigning to each hour its particular work, if not interrupted by accident or illness, the pupil would be able to come up to the prescribed standard. My friend tried to see if a few minutes could not be gained for a small amount of science, but the teacher, with his experience of thirty years, was inexorable, and he could not crowd in a knowledge of this world into the course of studies even edgewise. It has been sometimes said that the most ignorant members of our community are our men of education; and after looking over the scheme of studies which the victims of liberal education are obliged to follow, the paradoxical remark would almost appear to be true. It may therefore be asked what change the advocates of reform would propose? I cannot attempt to answer this question for all parties, as there is little uniformity of belief on the subject; but it may be well to state the case of a prominent party in the modern agitation. We have a large class among us who admit the culture to be derived from the study of language,

and who would not on any account banish Latin and Greek from the curriculum ; but they would remove that study to a later part of the course and replace it by scientific subjects. They think that those subjects which cultivate and strengthen the powers of perception, observation and judgment, should be taught first. They would instruct the youth in a knowledge of the laws of health or physiology ; they would have him know something about plants, animals, minerals, and the commonest laws of chemistry and physics, so that if the pupil is compelled to leave school at an early age, he would know how to take care of mind and body, and be enabled to turn his knowledge to some account. They would commence the study of Latin and Greek at a period when the mind is more mature, and thus avoid the enormous waste of time, the bad habits of droning over lessons, and the monopolizing character of the present system. There are so many instances of persons who commenced the study of the classics at mature years, who have excelled all others, that the advocates of postponing languages to the latter part of a boy's course appear to be justified in their claim. If the study of Latin and Greek could be commenced after the student enters college, it is believed that more real progress would be made in the four years of the college course than is effected under the present arrangement of devoting ten years of a boy's life to this study. This is the compromise that many good men advocate. They wish the preparatory schools to be wholly given up to mathematical, scientific and English studies, and to have the colleges assume the charge of the classics. Instead of devoting every hour of the preparatory course to languages, they would give the time to the sciences, and they would demand a knowledge of the general principles of science as a requisite for admission to college. This would be turning the tables entirely, and would afford scientific men a chance to try the effect of the modern education. The other side have had it all their own way for a long time, and it would appear to be no more than fair for them to let people of different views have a chance. Such a radical change as this cannot be accomplished at once. It would demand immense moral courage on the part of the trustees of a college to expose

themselves to the cry of lowering the standard of study. They would have the alumni of existing institutions and the prejudices of the whole community against them, and it would require a generation before the majority would become reconciled to the new order of things. Another obstacle would also arise at the outset, and that would be the difficulty of securing competent teachers of the natural sciences. It is this obstacle that has stood in the way of the introduction of the study of science in our schools. There are far too few teachers. To surmount this difficulty in the city of New York, a normal college for females and a free college for males have been established; and scientific schools have been founded in all parts of the country. These institutions are destined to work a great revolution. As soon as they have trained a sufficient number of teachers, we shall find our public schools affording a better education than at present, and their example will have to be followed by the owners of private schools, who desire to keep up with the progress of the age. What we want is science taught in plain English, and there is every prospect of our speedily attaining the desired end.—*Charles A. Foy, in the Journal of Applied Chemistry.*

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TO PRESERVE BOOKS.—It is not, perhaps, so generally known as it deserves to be, that a few drops of any kind of perfumed oil will secure books and manuscripts from the deteriorating effects of mould and damp. The species of leather so extensively used by bookbinders owes its powers of withstanding the effects of these destructive agents to the tar of the birch tree—*betula alba*. The preserving of books, written on papyrus and parchment, by means of perfumed oils, was known to the ancients. The Romans made use, for this purpose, of the oil of cedar; hence, undoubtedly, the expression of Horace, "*Digna Cedra*," meaning any work deserving of being anointed with this oil. It is frequently the case that valuable collections of books are greatly damaged by the effects of damp, and manuscripts to which great importance attaches are often wholly spoiled. The hint may be worthy of notice.



*WHO, AS APPLIED TO ANIMALS.*

SOME years ago—not to say how many—when I was in my “teens” and my English Grammar, a certain chapter of the latter upon the subject of Relative Pronouns was vividly and ineffaceably impressed upon my memory. Did I not undergo untold juvenile tortures on account of it? Was I not brought into cruel disgrace by being ignominiously sent out of my class and into my seat, for the purpose of forming a more intimate acquaintance with the habits and peculiarities of Messrs. Who, Which, What and That? And did not these inveterate enemies of mine rob me of a coveted hour of after-school fun and frolic, and, worst of all, lead me into taking unrighteous revenge upon my innocent book in a vicious fling, and an unmannerly disclaimer of all relationship with those tormented pronouns, impudently calling themselves “Relatives?”

During this time of fiery trial, I learned that the relative *who* had been appropriated solely and exclusively to the use of persons; animals not being permitted to aspire to anything higher than *which*, in the kingdom of pronouns.

This rule of language I then took to be as unalterable as the laws of the Medes and Persians. But what do we see now-a-days, almost without exception, in the profoundest essays as well as in the feeble magazine stories with which we try hard to amuse a leisure hour, but instances such as these—“the dog who barked” and “the cat who stole the cream;” the “horse who ran” and “the cow who upset the milk-pail.”

I have long wondered at this promiscuous use of the pronoun, once considered sacred to us animals of a higher order. Is it because we have all fallen victims to the Darwinian theory, and are expected to believe that, as the traditional boy has it, “we degenerated from monkeys?” I protest; for, granting that we once were monkeys, chattering in an unknown tongue and sporting tails, has not “natural selection” brought us out of our low estate?

Had I lived in that far away period,

“In days of yore, when Time was young,  
When birds conversed as well as sung,”

I would not have said a word about it—no doubt it would have been quite right and proper—but in these days of progress, when the crooked paths are being made straight, and abuses of every description are being brought before the public, and done away with, will not Mr. Richard Grant White, or any one else who knows all about “Words and their Uses,” come to the rescue, and set us right in this matter?

In case of failure in my humble effort at instituting an enquiry into this most common abuse, or rather misuse, of words, I shall apply to the *New York Times*.

DOROTHY DALE.

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### *TAME CODFISH.*

MR. BUCKLAND, in a recent number of *Land and Water*, gives an interesting account of a visit paid by him to a pond containing tame codfish at Port Logan, Wigtonshire. The property in question belongs to a gentleman by the name of McDougall, and consists of an amphitheatre, about one hundred feet in diameter, hollowed out of the solid rock by the sea. All egress from this is prevented by a barrier of loose stones, through which water passes freely. On approaching the shore of the pond, many codfish of great size were seen; and when a servant-woman who had charge of the fish approached with some mussels, the surface of the water was perfectly alive with the struggling fish. They came close to the edge, and after a little while permitted Mr. Buckland to take hold of them, scratch them on the back, and play with them in various ways. Among other experiments tried by him was that of holding a mussel in his hand, and allowing the fish to swallow his hand in the effort to obtain the mussel. These fish furnish to the proprietor an ample supply of excellent food, the flavor being considered much superior to that of the cod taken in the open sea. Whenever needed for the table, a selection can readily be made from the most promising of those at hand, and the fish secured without any difficulty.

*THE SONS OF PESTALOZZI.*

FROM THE GERMAN.

## CHAPTER XVIII.

WALDNER was superintending the students at their equestrian drill in the riding hall, a building situated at a distance from the institute, in another part of the city. It was a cool day, late in autumn. He had left the riding hall for a while to warm himself by walking up and down the street along the hall.

The Roumanian princes had been directed by their father to ask Waldner's forgiveness in a public act, at which the whole school was present. His forehead was disfigured by a scar which the wounds had left. But Gertrude had contrived to place one of his beautiful brown curls so skilfully over the forehead that the scar was generally concealed from sight. After entering on her duties in the house, she had again assumed the care of her former Steinthal pupil. Two years of separation had not been able to sunder their relation. An uninterrupted correspondence by letter had been maintained between them, and she was in the habit of returning all his letters after correcting his mistakes of grammar and style. Thus she had continued to be his teacher even at a distance. The fact that Waldner had developed to full manhood did not interfere with their relation as teacher and pupil.

But Theodore Waldner's spirit was clouded and sad. The more he had advanced in knowledge, the better he understood the nature of the crime committed against him. He could not, now, be less than twenty-three years old, and yet he was far behind those of the same age! Should it be impossible for him to overtake the others—and he felt it would be so,—the mark of insufficiency, of defective development would be forever stamped on his mind. Whenever he made an effort to grapple with mental labor, he felt exhausted, even after a short time. Intervals of rest—little as he liked them—were a necessity for him. In proportion as he appreciated the high importance of knowledge, he was ashamed

of his own want of it, although he was, certainly, not to be blamed for this. Formerly he used to weep when alone. That weakness he had partially overcome. That he yet sometimes shed tears was discovered by Fritz Bechtold, one of the teachers, who had become strongly attached to him, and by Gertrude, who often spent a few moments of leisure with him in his garret. Mrs. Nesselborn, indeed, denounced this "silly and useless crying" in unmeasured terms. It was high time for him, she said, to get used to his fate, as other people were, who had stopped talking about him altogether. Or did he perhaps still wish to be brought back to his prison, as he had done formerly?

Such a desire, indeed, was now very far from him. On the contrary, his loneliness in the midst of the noisy world, gave him pain, and it was insupportable for him to think that his mind was still in prison. Often people would try to comfort him by remarking that the riddle of his life was yet to be solved, and that he knew fully enough for the son of a Count or Prince. Then, his languid and dim brown eyes would suddenly brighten up; but it was only a transient gleam, and he soon relapsed into apathy. "It is better," he used to say, "I should remain as I am. For, should I prove to be what people have endeavored to prevent me from being, the dangers surrounding me would multiply, and who knows but that others might be made still more unhappy than I am?"

Far more gratifying was the development of Waldner's moral sense. A keen sentiment of honor and justice pervaded his whole nature. It was only with great difficulty that Waldner could comprehend the difference of ranks, the necessity of rulers, of warriors, and the exclusive claims of certain families to the rights of nobility, especially to the royal office. The oppression of the weak by the strong, or the overreaching of the ignorant by the crafty and wily, was revolting to his feelings. He could never forget how much he had to suffer himself from the heartless tricks men were cruel enough to play upon him. His confidence had been misused almost in all respects, and when the poor young man had fallen into the traps laid for him, people would split their sides with laughter. On seeing the relentless use

they had made of their superiority over him, diffidence and suspicion of the whole human race had taken possession of his soul. His eyes had assumed an habitual look of shyness, expressive of that suspicious reserve generally shown by those who know that they must be on their guard. In taking a seat he was still afraid that his chair might break under him. So soft was his heart that the mere sight of fresh killed carcasses, hanging in front of butcher shops, or of an emaciated horse, compelled to draw a heavy load, could draw tears from his eyes. But this same gentle heart would swell with anger, and burst with indignation, when he saw the suffering of wrongs or the triumph of wanton insolence. But alas! he had to pay dearly for these generous impulses!

On the day of his return from Wülfiug's house, Nesselborn had taken him aside, and in Gertrude's presence, had thus addressed him:

"My beloved son, do not believe that all could or should be perfect in this world. The greater our aims are the more we need wisdom to avoid the cliffs that are in our course. To steer our vessel straight against obstinacy, blind folly, and insolent defiance, would bring sure shipwreck which must deprive us of all opportunity for future good. With such cliffs the educator has to struggle. The very best children will have their moments of obstinacy, and bid defiance to the teacher. Then the wise educator will master the passion that overcomes him; he must yield for the time being, and wait for a better hour to appease the awful demon that often obtains control of the human soul, and binds its moral power. In such dark hours even the kindest appeals are often met with scorn, and the demon will convert your very love and sympathy into venom, and harden the heart of the pupil. Even then you must stop and hold the bridle of your impulses with a firm hand."

Waldner looked at Gertrude, as if to question her whether she approved of these maxims. "Yes, Theodore," she said, with the full expression of love she felt for her uncle, and with that firm and expressive voice which was peculiarly her own.

It was remarkable how tall Gertrude had grown. Her

figure was imposing, her step quiet and determined, her indefatigable activity noiseless, but always practical. Bögen dorf was perfectly right when to the Prince he had represented her presence as striking. He had seen her when inspecting the Teachers' Seminary at Waldburg, and ever since he had retained her majestic form in his memory. Her features were plastic, but rather too severe to be of perfect beauty. Her hair was dark and rich. She covered it with a bonnet, like a servant. The style of her dress was extremely plain. In the institute she never appeared otherwise than in a dark blue garment with a great white apron.

The time Waldner had spent with old Rector Nesselborn had been of infinite value to him. When he first arrived there, Gertrude had directly received him with sisterly affection. She not only taught him, but showed him how he must teach himself. After her departure for the Seminary, he remained alone with the old Rector, who was rapidly losing strength, so that he often had to take care of the old master and of the scholars. By this necessity, his ingenuity was called forth. At length the venerable man breathed his last in Waldner's arms. The impression of this awful scene was the deeper, since he had never yet seen a dying man. The lesson which it taught him was lasting. He never had been able to comprehend immortality, and much less the mysteries of the fall of man, the mediation and atonement by the Saviour. But the dying moments of his fatherly friend drew the veil from the other world. "Does the sun die when, in the evening, we see him sink beneath the forest?" So he had written to Gertrude, immediately after the funeral, which she could not attend because of the great distance of her Seminary.

Nobody in Steinthal had manifested any interest in him, except Gertrude and her grandfather. People seemed to think that, by showing any affection for Waldner, they might draw upon them the displeasure of their Lord and Lady. But it was impossible that the facts connected with his origin should remain entirely unknown to Waldner. He had been told that a lady of high rank was under the suspicion of having given him his life in secret. He well knew that he was living now near her. He also knew that the Fernau brothers were avoiding each other's company.

And yet—contrary to all our experience derived from the action of others in similar circumstances—he shrunk from seeking her presence, and much less would he have asked her to recognize him as her son. Waldner's conduct formed a peculiar contrast with that of the unhappy English poet, who believing he had discovered his mother in the highest spheres of London aristocratic life, pursued her with the obstinacy and importunity of a maniac. Theodore rather felt a cold contempt for those to whom he owed his life. He shuddered when he first came near villa Wolmerode, and his whole frame trembled.

But President Fernau's and his family's generous interest in him he appreciated the more, as the antipathy existing between the two Fernau families was not unknown to him. He thought it to be his first duty to call on his benefactors and thank them for their love. Carrying out this purpose, he found that only Mechthild was at home, but he was received immediately by her. In the course of conversation she expressed her sympathy with his sad fate, and her voice touched his inmost soul. He imagined that Mechthild was descending into the night of his dungeon, to share for awhile his captivity in order to bring him comfort. Such questions as she asked him he had never heard before. Thus she inquired whether, in the long years of his imprisonment, the idea of space and time had never entered his mind; whether he could form any idea of music; whether or not the sound of his own voice, or even that of his jailer's keys had made an effect on him somewhat similar to music? She was deeply interested when he told her that during his dungeon life he had always imagined to hear one single note of awful solemnity, a note long and sustained as if it were the key-note of eternity. But of real music, of instrumental or vocal tones and the possibility of their change he said he had never had any presentiment. Subsequently, the hearing of musical sounds had caused him pain, and music had produced intense torment.

"We others," said Mechthild, "were lulled to rest and sleep by the songs of our nurses, and thus our nervous system was accustomed and taught to be soothed by music. With you, solitude performed that office, giving you rest

without assistance. Thus music is now discordant to you, and your nerves reject it, since they are not prepared for it. But did you never see a drama?"

"Sometimes," he said.

"Have you ever seen Faust?"

"Never," said Theodore.

"They give Goethe's Faust here with the late Prince Radziwill's sublime music. There is in the first act a wonderful passage, which would remind you of that one sound of eternity that you imagined to hear in your dungeon. The scene is that of Faust's soliloquy. The world of spirits is beginning to be aroused by Faust's unearthly words. He is yet absorbed in his strange and bold meditations, but already you feel that the miracles of the next scene are preparing. This is indicated by the bassos and violins which sustain one single note, always remaining the same, without any change of pitch. It is as if we heard the very beginning of creation and time, and the preparing of chaos to spring into existence. You, in your dungeon, had only stones about you. But had you been surrounded by leaves and flowers, they would have spoken thus I think—would have thus accompanied that majestic, eternal note—"

These remarks were interrupted by Mechthild's mother and sisters entering the room. While they were bidding welcome to the visitor, Mechthild withdrew. This filled Waldner's soul with unspeakable grief. But her image had made an indelible impression on his soul, so that, with his fine talent for drawing, he could have sketched her portrait. Mechthild was not tall, but her countenance was full of expression, and showed those delicate lines of earnestness which, in the absence of all rigor, are of so peculiar an effect in the face of women. Her forehead was not high, but it bore the marks of intelligence by a slight elevation over her light-brown eyes which were shaded by dark lids. Her mouth appeared rather larger than it really was, its angles bending a little toward her cheeks, which gave to her mouth the type of firm resolution.

Waldner was now looking with great anxiety for a performance of Faust. Every day he read the play bills, but he was always disappointed.

While Theodore was walking up and down the street in



front of the riding hall, he noticed the show window of a bookseller's shop, in which new and second-hand books were exposed for sale. Among the different title pages he read: "THEODORE WALDNER, OR A CRIME AGAINST THE SOUL-LIFE OF MAN." He well remembered that Nesselborn had written such a pamphlet, but it had been withheld from him. When the book was published he was hardly able to read it, and at a later period he had forgotten its existence. Waldner entered the shop to buy his own history. Immediately afterward a lady with a veil over her face stepped in, and inquired for Xaver Saintine's French novel "*Picciola*." While the bookseller was searching for a copy, she lifted her veil, and Waldner, found himself in Mechthild de Fernau's presence. Scarcely was he able to reply, to the kind words of recognition with which she addressed him. When she had received the book, he said, "I have been waiting all this time for a representation of Faust."

"Ah! you remember our conversation. You want to hear that long sustained, wonderful note, do you not? The little book I have just bought contains a similar subject. It describes a life in a dungeon. *Picciola* pours comfort into the soul of the poor prisoner. The work has received the prize of the French Academy; so there will be no objection to my reading it, I think. Do not forget to come to see us soon."

With these words the lovely form passed out, after bowing politely both to the bookseller and to Waldner. The latter immediately asked for another copy of the book, but the bookseller regretted that there was none in the shop. However, he handed Waldner another book, which he said was very similar to *Picciola*. It was by the same author, and had the title "*Le Mutilé*." The purchase was made. Although Waldner was but a beginner in French, he determined to dig through the book.

Unfortunately this episode had made him miss the moment that his students had left the riding hall. When he passed out of the shop, he saw them already at the end of the street. Using the utmost haste, he finally came up with them, and immediately perceived that one of the students, Count Linsingen, had absented himself. He learned by inquiry that Linsingen had separated from the rest and gone "down

town" with the riding master. This was strictly forbidden by the regulations. Count Linsingen was eighteen years old and a bad subject. His father, who held a high position in the diplomatic service, not wishing to take his son with him to foreign capitals, had intrusted him for some years to Nesselborn's care. The young Count was the most intimate companion of the Roumanian princes, and did his best to make the spirit of insubordination and disorder, inaugurated by the princes, a permanent feature of the institution. Waldner, upon his return to the institute, was lectured by both Nesselborn and his wife for his lack of attention which had given to Linsingen an opportunity to break the regulations.

"Very well," said Waldner, "I must acknowledge my neglect; but I expect that Count Linsingen will be duly punished." "Of course," added Gertrude, who was present; "twenty-four hours in the '*Carcer*,'<sup>1</sup> according to the regulations."

"Certainly," said Nesselborn, "that must be his punishment." Mrs. Nesselborn endeavored to remonstrate, but her husband remained firm for once.

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A NEW SCHOOL FEATURE.—In Denmark children may attend school one part of the day, and work the other part. A school-house in Copenhagen is furnished for a thousand children; one session is held in the morning, a thousand attending; in the afternoon a second thousand attend, both schools being under the same general management. This system secures a happy union of bodily and mental exercise. It is profitable whether considered in an intellectual, moral or pecuniary point of view, and is based on sound principles. Experience proves a few hours of mental labor better for the educational progress of the student, than a whole day of forced application to books, as was the custom in early times.

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<sup>1</sup> The "*Carcer*" is the "school prison." Disorderly or negligent students, both in the gymnasiums and the Universities suffer imprisonment for one or more days, sometimes for weeks. One of the lower officials conducts the culprits from the "*carcer*" to the recitations, and after their close they are taken back to the "*carcer*." It is considered as one of the most efficient means of keeping discipline both within and without the recitation-rooms.—*Translator.*

## EDUCATIONAL INTELLIGENCE.

## STATE SCHOOL OFFICERS.

| STATE.              | TITLE.                    | NAME.                 | POST OFFICE.    |
|---------------------|---------------------------|-----------------------|-----------------|
| Alabama.....        | Supt. Public Instruction. | Joseph Hodgson....    | Montgomery.     |
| Arkansas.....       | " " Schools....           | Thomas Smith.....     | Little Rock.    |
| California.....     | " " Instruction.          | H. N. Bolander.....   | San Francisco.  |
| Connecticut.....    | Sec. Board Education....  | B. G. Northrop....    | New Haven.      |
| Delaware.....       |                           |                       |                 |
| Florida.....        | Supt. Public Instruction. | Charles Beecher....   | Tallahassee.    |
| Georgia.....        | School Commissioner....   | J. E. Lewis.....      | Atlanta.        |
| Illinois.....       | Supt. Public Instruction. | Newton Bateman....    | Springfield.    |
| Indiana.....        | " " "                     | Milton B. Hopkins.... | Indianapolis.   |
| Iowa.....           | " " "                     | A. S. Kissell.....    | Des Moines.     |
| Kansas.....         | " " "                     | H. D. McCarty....     | Leavenworth.    |
| Kentucky.....       | " " "                     | H. A. M. Henderson    | Frankfort.      |
| Louisiana.....      | " " "                     | Thos. W. Conway..     | New Orleans.    |
| Maine.....          | Supt. Common Schools..    | Warren Johnson....    | Topsham.        |
| Maryland.....       | Prin. State Normal Sch..  | M. A. Newell.....     | Baltimore.      |
| Massachusetts.....  | Sec. Board Education....  | Joseph White.....     | Boston.         |
| Michigan.....       | Supt. Public Instruction. | Oramel Hosford....    | Lansing.        |
| Minnesota.....      | " " "                     | H. B. Wilson.....     | St. Paul.       |
| Mississippi.....    | " " Education..           | Henry R. Pease....    | Jackson.        |
| Missouri.....       | " " Schools....           | John Monteith....     | Jefferson City. |
| Nebraska.....       | " " Instruction.          | J. M. McKenzie....    | Lincoln.        |
| Nevada.....         | " " "                     | A. N. Fisher.....     | Carson City.    |
| New Hampshire.....  | " " "                     | J. W. Simonds....     | Concord.        |
| New Jersey.....     | " " "                     | E. A. Appar.....      | Trenton.        |
| New York.....       | " " "                     | Abram B. Weaver....   | Albany.         |
| North Carolina..... | " " "                     | Alex. Iver.....       | Raleigh.        |
| Ohio.....           | Com'r Common Schools..    | Thos. W. Harvey....   | Columbus.       |
| Oregon.....         | Supt. Public Instruction. | L. F. Grover.....     | Salem.          |
| Pennsylvania.....   | " Common Schools....      | J. P. Wickersham....  | Millersville.   |
| Rhode Island.....   | Com'r Public Schools....  | T. W. Bicknell....    | Providence.     |
| South Carolina..... | Supt. Public Instruction. | J. K. Jillion.....    | Camden.         |
| Tennessee.....      | " " "                     | Wm. Morrow.....       | Nashville.      |
| Texas.....          | " " "                     | J. C. De Gress.....   | Austin.         |
| Vermont.....        | Sec. Board Education....  | John H. French....    | Burlington.     |
| Virginia.....       | Supt. Public Instruction. | Rev. W. H. Ruffner.   | Richmond.       |
| West Virginia.....  | " Free Schools.....       | Chas. S. Lewis.....   | Charleston.     |
| Wisconsin.....      | " Public Instruction.     | Samuel Fallows....    | Madison.        |

## TERRITORIAL SCHOOL OFFICERS.

|               |                           |                     |                |
|---------------|---------------------------|---------------------|----------------|
| Colorado..... | Supt. Public Instruction. | W. C. Lothrop.....  | Denver.        |
| Dakota.....   | " " "                     | Jas. S. Foster..... | Yankton.       |
| Idaho.....    | " " "                     | Daniel Crane.....   | Boise City.    |
| Indian.....   | " Inst'c. Cherokee Na.    | Spencer S. Stephens | Tahlequah.     |
| Utah.....     | " Public Instruction.     | Robt. L. Campbell.. | Salt Lake City |
| Wyoming.....  | " " "                     | Dr. J. W. Hayford.. | Laramie.       |

HARTFORD, CONN.—According to the annual report of the "Board of Visitors," the number of children between the ages of four and sixteen, is 8,258, an increase over last year of 424; the whole number registered in the schools, is 5,669, an increase of 136. The total expenses were \$177,395, of which \$75,261 were for teachers' wages and \$73,608 for new buildings; number of teachers, 122; number of school buildings, 17. The schools are in good condition and seem to be under excellent management. A large part of the report is devoted to the High School and its new building, a full account of which has been published in this Magazine.

CHICAGO, ILL.—The schools all seem to be in good working order, though some have been considerably broken up by change of teachers and pupils. The average attendance is 20,432, about two-thirds of the number attending at the time of the fire. Large numbers are therefore unable to gain admittance. It is probable that many of them are too poorly clad to attend, while many more are trying to help earn a living. Every possible effort is being made by the department of education to relieve the needy among pupils and teachers, and very much has been accomplished in this direction. The salaries of the teachers have not been changed.

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### CURRENT PUBLICATIONS.

THE task of tracing *correctly* the words and idioms peculiar to the Americans,<sup>1</sup> is, if not absolutely hopeless, certainly extremely difficult, and to obtain even a nearness to accuracy is almost impossible. No candid critic will expect to find a work of so wide a scope to be free from errors and omissions. Prof. De Vere has brought to the solution of his problem wonderful industry and research; though, it must be admitted, that in many cases he speaks much too confidently.

Notwithstanding this, the book—which, by the way, is printed in the usual handsome style of its famous publishers

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(1) *Americanisms—The English of the New World.* By M. Schele de Vere, LL.D. C. Scribner & Co.

—is very readable. It is both entertaining and useful, full of happy hits and valuable suggestions. By the use of the index we are enabled to find a correct explanation of a great many words and phrases; and, in almost all instances, at least a reasonable one.

The subject involves investigations which hardly ever admit of strict demonstration: hence it is quite natural that the learned author of "Studies in English" should have sometimes been led into errors. His explanation of the saying, "I acknowledge the corn," sounds plausible enough; yet, it may be wrong, after all. We have some recollection of seeing the words in some old play or other: perhaps they may be traced in Shakespeare, where one can find everything—even "go to grass," and "spite o' thunder."

We have been led to make these remarks upon seeing—in a New England journal—a very severe, and, as we think, unfair criticism on Prof. De Vere's work. Some fierce Bostonian cuts up the unlucky author in the following style:

Why is Mr. Bartlett's Dictionary of Americanisms an "exhausting" work (see p. 4 of Prof. De Vere's book)? Hon. "John" Hammond Trumbull's name (p. 5) is James. Not all Indian words are "musical," by any means (p. 11). Saratoga is, but Pyquag is not. The Cherokee and other Muscogee languages are, but the Abenakis and many of the other northern Indian tongues are not. Try Eliot's Indian Bible, for instance! "Lovewell's Flight" (p. 14) should be "Fight." There is no such State as "Lincoln" (p. 15). Chicago (p. 17) is most frequently thought to have been named after a chief of that name; not from a Pottawatomie common noun. The rhymes ascribed to the Dutch laborers after Duyckinck, as the origin of Yankee Doodle (p. 24) are mis-spelled, as the endings of the second and fourth lines should be *lauter* and *Tauther* respectively, instead of *lenter* and *Tanter*. What the Indians sold in 1638 at "Tammany, a hill north of Newport," was not "Aquiduct or the Isle of Peace," but Aquidneck; and the same is not "now the State of Rhode Island," nor was it ever. It is not true that "only Indian children ever laugh," (p. 32) it being well enough known that adult Indians are as jolly together as other people on occasion. To the Indian phrases become common (p. 36) should have been added "war-paint," for one's best clothes. It is not W. H. Dale (p. 38), but Dall, who wrote a book on Alaska. "Nubbin" (p. 39) derived from "nothing," is more likely to come from the colloquial *nub*, a

small hard lump. "F. Olmsted," so quoted (p. 47 and elsewhere), should be F. L. Olmsted.

The story quoted from Mr. Hotten's Slang Dictionary (p. 52) is absurd; a man might as well be said to have dressed himself in a cat-skin as in a raccoon-skin. "La Hentan" (p. 53) should be La Hontan. To the meanings attributed to "skunk" (p. 54) should have been added the very common one, to beat an adversary at cards or other games so badly that he scores nothing at all. "Whitewash" (not in the book) is used in the same way. "Varmin" (p. 55) should be "Varmint." The tamarack (p. 57) is not a laurel, but a larch. It is not true, as stated at p. 59, that "juice of the fruit" (i. e. of the butternut), "rich in oil, serves as a dye;" nor are dyes oily. There is no such author, we are confident, as Gilii (p. 62). The "mummachog" or mommychog (p. 67) is as well known on the Connecticut coast as on that of Long Island. "Killy-fish" (p. 80) are known in many localities besides the waters round Staten Island. "Dutch Uncle" (p. 83) is most used in New England, not to mean one whose presence is undesirable, but in the phrase "talk to him like a Dutch Uncle, with tears in his eyes and his fist doubled up;" whose meaning is plain. "That beats the Dutch," for whose origin Prof. De Vere is at a loss (p. 83), finds a very probable beginning in the naval supremacy which the Dutch were so well maintaining over the English under Charles II. Pork and molasses (p. 84) is not a New England dish. "Cold slaw" (p. 85) is about as near to the German *kohlsalat* as to the Dutch *kool-slaa*. "F. Cooper" (p. 86) should be J. F. Cooper. "School" (of fish, p. 88) is not "pronounced like shoal," but just as if applied to an institution for teaching. "Levee" (p. 98), it should have been explained, also means any sloping bank used as a wharf, whether embanked artificially against the river or not, as at Cincinnati. Col. H. Bouquet's name is mis-spelled "Boquet" at p. 112, with pains. "Gilmore" (p. 117) should be Gillmore.

To the American words taken from German should be added "hand-book;" at least it should as much have been named as "stand-point." It is Kriss Kringel, not Kingle (p. 145), which is a corruption of *Christkindlein*. "Hold on" is not German but nautical in origin. "Truthful James" was not "invented by John Phoenix," but by Bret Harte. This last gentleman's name is Bret, not Brett (p. 162). "Diggings," as a noun in the sense of "neighborhood," is wrongly attributed (p. 170-171) to Jeremy Taylor. The divine uses it as a participial noun in the sense of "machinations." To "pass in his checks" (p. 195) is not derived from the checks on a shirt, but from the checks used in faro banks. The story about "talking turkey" is so told as to

lose all its point, at p. 203. It is, of course, that of the sly white man who thus proposed to divide spoils with his Indian fellow-hunter: "Now, either I'll have the turkey and you have the crow, or you have the crow and I the turkey, just which you like." "Ugh," said Mr. Lo, "you no talk turkey to me at all." "Honeyfogle" and "honeyfugle" (p. 205) do not show the sound of this word. It is "honeyfuggle," and it denotes not mean "swindling or cheating," but to flatter and talk over a person into doing something. "Buck negro" (p. 209) is simply male negro. "Gobble" or "gobble up," in the sense of "take captive" (p. 210), dates further back than to the rebellion. "Team" (p. 222) was applied to a series of shoemakers working on the principle of a division of labor, long before the Chinamen came to North Adams. Along with "turn-out," "lay-out" and "roll-out" (p. 223) should have been given "out-fit," which is not in the book. "Roustabout" (p. 225) means a negro deck-hand on a steamboat, not a rough nor a rowdy. "Bostons" or "Bostonais," for white men (p. 226), can be traced pretty directly, we believe, to the Massachusetts trading voyages to the northwest coast. With the phrases "met with a change," etc., (p. 231), should have been given "indulge a hope" and "experienced a change." Besides "deacon out" (p. 237) should have been mentioned "line out," which means the same. "Cumings" (p. 242) should be Cumming. "County of Berkshire" (p. 254) is not a pleonasm any more than "people of *Suf folk*" would be. Both words are mere names in Massachusetts. "Gerrymander" (p. 255) is not explained at all. It was the name printed under a picture of a pretended monster, whose shape was modified from the distorted geography which Mr. Gerry's friends inflicted on part of the State for the sake of economizing majorities. "Michigander," by the way, a word in the same range of creative thought, is not in the book. "Stars and Bars" (p. 258) was a name not of the Union but of the Confederate flag during the rebellion. "Scullduggery" (p. 261), said to mean great skill in the art of pipe-laying, should have been explained to be a modification of the Scottish "sculduddery," *i. e.*, lasciviousness. "To the victors belong the spoils" (p. 265) originated, not with General Harrison, but with Secretary Marcy. In speaking of "platforms" in politics (p. 269), the phrase "spit on the platform" should have been given. "Paster" is at least as usual a name as "sticker" (p. 270), for slips to be used in making "split tickets." Connecticut is not "often mentioned as the *Blue State*," but rather as the Nutmeg State or the Land of Steady Habits. "Blue Law State" has been used, however. "Continental damn" (p. 276) was not "applied to the Continental paper

money," any more than to any other worthless thing. Mr R. G. White's derivation of it through "Continental's dam," quoted there, is wrong; the form is simply an intensive descriptive one, and is used also in the provincial oburgation, "Go to Continental grass!" "Bag" in the sense of "capture" (p. 284) did not originate in the rebellion. "Miscegenation" (p. 288) did not originate with any renegade southerner. It was invented as part of a tract on the subject, which was got up in New York, during the war, by two rather notorious "Bohemians," and contrived to be attributed to a person who was then considered respectable.

These items have been noted in a rapid perusal of the first three hundred pages of the book. In the words of one more Americanism not contained in it, "Nuf ced."

THE revised edition of Baskerville's English Grammar<sup>2</sup> for Germans has fallen into the hands of a critic in the Rhode Island *Schoolmaster*.<sup>3</sup> He seems to be of the class which assumes that a glance at a book and an indifferent knowledge of its subject is all that is required to write a review.

He begins with a display of cheap scholarship in an attack upon the revising editor because he has retained the old nomenclature of grammar. For this he may be a "conservative," but the "pedants" are those who have endeavored to palm off a pseudo-scholarship under the guise of a pedantic nomenclature.

If a real scholar should write an, or rather *the*, English Grammar, we might forgive him for changing the words that are the common property of grammar in all tongues. The greatest grammarians of both ancient and modern languages use as a rule these terms, except as they wish to express newly discovered distinctions. It would be more satisfactory if *our learned* grammarians would better define the old words, which we all know, than by avoiding this Scylla make for us a Charybdis of a new grammatical language. We want facts not forms, things not words. There have been great grammarians who have formed a system of grammar and treated language merely as a means to illus-

<sup>2</sup> Dr. Baskerville's *Practisches Lehrbuch der Englischen Sprache* Gügglech umgearbeitet und für den Gebrauech en Ameraka eingerichtet von Gustav Fischer.

<sup>3</sup> Rhode Island *Schoolmaster*, October, p. 338.



trate their system; but their weak imitators in English have not risen to the dignity of this mistake.

Our Rhode Island critic ventures mention only of the potential mood, and calls it illogical. But by the logic of common sense, why is it? How will it "plague" a German, should not Prof. Fischer, in exhibiting the English language, give the usual and accepted terms, and would it not have been an insolent pedantry to have done otherwise, for which a German would have given him no thanks? Does he wish, instead of potential to have subjunctive or conjunctive, and instead of subjunctive to have conditional? But if the critic knew the nature of the German conjunctive, he would have known that this would have "plagued" the Germans worse. It would be exceedingly interesting to know what this grammatical genius has in store for the world. Will he please enlighten us?

The next stricture directed against Prof. Fischer's system of pronunciation is equally notable from the confusion of meaning and facts.

This tyro in phonetics amuses himself because man and men have no difference in sound for German ears, but he will find on p. 86, distinct sounds for each, by which a German may learn to distinguish them.

What shall we say of the wonder of this tyro in phonetics as he lights upon the discovery that there are obscure sounds in English which can be very nearly represented by a single symbol?

If he will amuse himself by experimenting, he will find that most persons make no appreciable difference in these obscure sounds. Let him begin very appropriately with "*ignorance*," and see how many persons can tell what difference they make between the *o* and *a* in this word. The difficulty of Germans, which Prof. Fischer has so wisely met, is that they insist upon giving every vowel its clear sound, and can hardly be convinced of this peculiarity of our language. This English obscure sound he represents by the German obscure *ä*, adding that a very slight vanish of the written letter should be heard.

And now the critic would go a good way to hear English pronunciation learned from this system only, but if he had

added another hour to the fine polish of his German, he would have found that Baskerville's editor insists that all the sounds, given in his table, must be learned from the mouth of one who pronounces well. Of what system of pronouncing a foreign language, is not this true?

In conclusion, he casts a slur upon the claim of revision as it stands on the title page. He very naively says that *he would like to know if he were not already assured about it.* Then why does he say anything about it? He must have read the preface where Prof. F. states that only a very small part of the original work is retained, and if he had examined the original Baskerville, he would have looked in vain for a sufficient reason for putting Baskerville's name on the title page.

This critic puzzles us. He is either a wolf in sheep's clothing or a sheep in wolf's clothing. He either means nothing, or if he means something, what he means is not true. He reminds us of crystals of vivianite which appear to be of a beautiful blue, but if we turn them in the light they are decidedly green. In any case, the criticism is unworthy of the journal in which it stands. D. T. R.

H. VAN LAUN, one of the Masters of the Edinburgh Academy, has translated H. A. Taine's masterly "History of English Literature."<sup>(4)</sup> It contains a preface, prepared for this translation, by the Author. The work is divided into three Books. Book I, "The Source," has chapters on the Saxons, the Normans, and the New Tongue. Book II, "The Renaissance," has six chapters on the Pagan Renaissance, the Theatre, Ben Jonson, Shakespeare, the Christian Renaissance and Milton. Book III, "The Classic Ages" is on the Restoration. It is a great work and will be hailed by students of Literature generally. 531 closely and clearly printed pages.

AUGUSTUS LODEMAN, exercising himself for increasing the number of Educational works on modern languages—which already overflow the book market—has prepared a little book entitled "German Conversation-Tables,"<sup>(5)</sup> a new method for teaching German conversation in classes.

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(4) and (5) Holt & Williams, Publishers.

MR. JOHN WILSON issued his first "Treatise on Punctuation" in 1826. That was designed solely for printers. In 1850 his second edition appeared, greatly enlarged, and designed for letter-writers, authors, printers and proof-readers. In 1855 a third edition was issued, with improvements. And now, three years after Mr. Wilson's death, the twentieth edition<sup>(6)</sup> appears, adapted to the use of schools. It is the most complete work, on the subject, now published.

PROF. ALPHEUS CROSBY has prepared "A Compendious Grammar of the Greek Language."<sup>(7)</sup> He has made throughout an effort to carry nothing to excess, neither insertion nor omission, but to write that "middle" Grammar which American Teachers are expected to approve.

PROF. JOHN BASCOM'S new book, "Æsthetics, or the Science of Beauty,"<sup>(8)</sup> should not arouse prejudice on account of its title. It is made up of sixteen excellent "Lectures on Taste."

"JAPAN, IN OUR DAY,"<sup>(9)</sup> compiled and arranged by Bayard Taylor, is the first volume of an "Illustrated Library of Travel, Exploration and Adventure," to be issued by the publishers of "Library of Wonders."

"HALF HOURS WITH MODERN SCIENTISTS"<sup>(10)</sup>—Huxley, Barker, Stirling, Cope, Tyndall—is a neat volume made up of the first five numbers of pamphlets published as the "University Scientific Series." They are now put up in substantial binding to give them greater permanency.

"SERVING OUR GENERATION, AND GOD'S GUIDANCE IN YOUTH,"<sup>(11)</sup> are two sermons preached in the Yale College Chapel, by President Woolsey, put up in cloth binding, on toned paper.

"THE OLD BACK ROOM,"<sup>(12)</sup> by Jennie Harrison, is a very tasteful little volume, illustrated, for the young.—"August and Elvie"<sup>(13)</sup> is volume first of a series, by Jacob

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(6), (7) and (8) Woolworth, Ainsworth & Co., Publishers. (9) Chas. Scribner & Co., Publishers.  
 (10) and (11) Chas. C. Chatfield & Co., Publishers. (12) and (13) Dodd & Mead, Publishers.

Abbott. It is a pretty little book, intended to entertain and instruct the young.

"FIRST HELP IN ACCIDENTS AND IN SICKNESS"<sup>(14)</sup> is a very useful guide in the absence, or before the arrival of professional assistance. It is published with the recommendation of high medical authorities.

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*MISCELLANEA.*

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IN the last meeting of the German Anthropological Society, the greatest of living Anthropologists, Prof. Virchow of Berlin, has taken a decided stand against Darwinism. The transformation of species, according to this great scholar, is yet an open question. Darwin's theory, he says, offers nothing more than a mere possibility to solve the different phenomena of natural life. Arguments based on real facts are absolutely wanting. Not even the transition of one *race* into another has been proved.

THE officers of the French army in Paris have formed a society for spreading the knowledge of the German language, and translating German military works into French. They publish a monthly journal, the last number of which reports that they have organized semi-weekly meetings for the purpose of improving in the German language. The "*Sidcle*," a leading Paris paper, calls the attention of the officers to the fact that the learning of the German language requires "earnest, hard, and persevering study." We are inclined to think, however, that this study cannot be so very hard for the French sons of Mars, seeing that they had a splendid opportunity for a most thorough preparation during their long "leisure" in German prisons.

YEARS ago in our school-boy days, the Capitals of Georgia and Louisiana were respectively Milledgeville and Baton Rouge; and according to Warren's Geographies,

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(14) Alexander Moore, Publisher.

edition of 1871, they are such still. The same authority gives us Wheeling as the Capital of West Virginia. Most people, however, think that for Milledgeville, we should read Atlanta, for Baton Rouge, New Orleans, and for Wheeling, Charleston. Why don't book-makers keep up to the times?

The Capital of Montana Territory as given in all the geographies we have seen, is Virginia City. In the authorized edition of the Post Office directory, it is represented as Helena. Which is right?

NEW questions for examination-day:—"How many is five? And why?"

"Is it, or is it not? And how?"

"SALT" is the subject of the school-boy's latest composition: "The salt is a spice which spoils the potatoes if you forget to put it on."

RUSSIA is making up for lost time in the matter of education, and has recently organized fifteen thousand public schools.

IT is claimed that the first book printed on this continent was by Combeyer, in Mexico, in the year 1544.

JAMES ANTHONY FROUDE, the historian, has decided to come to this country next Autumn.

THE greater the difficulty the more glory in surmounting it. Skilful pilots gain their reputation from storms and tempests.

McLOUGHLIN BROS. are to reprint, in *fac-simile*, the London "Popular Edition" of Dickens, now selling in England by the hundred thousand, which they will sell for ten cents.

THE population of the United States, as contained in the report of the Superintendent of the Census, is: States and Territories, 38,923,210; white, 33,589,857; colored, 4,886,387; Chinese, 63,254; Indians, 383,712; Indians out of tribal relations, 25,731; Indians on reservations and at agencies, 963,662.

IT is supposed by many that education is almost the last thing thought of in the countries of South America. Yet

provision for teaching the young has of late been carried even to the compulsory form. The Assembly of the Province of Rio de Janeiro has passed a law making it obligatory on parents and guardians to send their children to school. This applies to both sexes, and to all persons between the ages of seven and fourteen. The school may be either public or private, but to one or the other all must go. Children, whose parents are too poor to give them decent clothing, are to be clad at the cost of the Provincial Treasury. Such legislation as this, coupled with the good news from the country districts wherein the new Slave Act has gone into effect, gives cheering hopes for the future of Brazil.

THE "Necrology of Eminent Teachers," expected for this month, has not arrived up to the time of going to press. Perhaps the eminent writer of "Necrology" may require to have his name added to the list of eminent departed for 1871.

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### *SCHOOL AND COLLEGE CATALOGUES.*

MUCH nonsense appears in College Catalogues. The Catalogue of RUTGERS COLLEGE for 1871-72, is so exceptionally good that we take occasion to make special mention of it. Its external appearance is in its favor. It is on good thick paper, printed in clear type, and so subdivided and marked as to tell its story plainly. It gives evidence of the steady progress which the friends of that college have marked with so much satisfaction. Its Board of Trustees in the main seems made up of good *live* men. Its faculty with President Campbell at its head, still comprises the names which have been associated with the rapid growth and real progress which have marked the institution during the past decade. The catalogue of students includes one hundred and ninety names, showing an increase in the lower over the upper classes.

Whether, unlimited increase is desirable in the number gathered in an institution of the grade of our American Colleges may well be held to be an open question. Two hundred students arranged in four classes, and subdivided into convenient sections, may well be considered a manageable mass of youthful humanity, to increase which may involve most decided disadvantages. Personal contact of professor and student, a greater sense of responsibility on the part of the pupil, a better opportunity for severe educational drill so neces-

nary to students at that age, are advantages not to be thrown away for pride of numbers. An American College to fill its position profitably must set itself to give mutual discipline, to teach methods and habits of study, as well as to communicate knowledge. The opening of foreign Universities by parading profound lectures on history or linguistics, or the philosophy of mathematics, to classes of helpless half-trained lads fresh from grammar schools, or district schools, is not complimentary to American sagacity. We are glad to see that this old college has no such absurd notions, but strives to do good honest work, without pretentious boasts, and the parent who wants his son well trained for a future professional career, or for the practical realities of life, will do well to look at its curriculum.

The catalogue before us gives full information concerning the courses of study of the different departments, and concerning the entire operations of the college. The Alumni Association has elected for its President Judge Larramore of New York. The Phi Beta Kappa Society is presided over by President Campbell.

Under Necrology we see noted the deaths of Rev. John Manley of New Brunswick, the Rev. J. V. N. Schenck of Pompton, the young and brilliant Major Herbert of New Brunswick, and Col. Burr Porter, whose gallant services in three wars have given to his memory a flavor of Knight-errantry. He served in the Crimean war, in the Turkish army, and was promoted to be a "bashaw" and covered with decorations for his gallantry. Then he served with distinction in our civil war, on Gen. Fremont's Staff, and as Colonel of a Massachusetts regiment. Finally he closed his career in the Franco-Prussian war, in a skirmish fought on December 10, 1870, waving his sword over his head, and, shouting, "I will show you how we fight in America," he galloped into the conflict and received a bullet in his breast.

BOWDOIN COLLEGE, Brunswick, Maine, J. L. Chamberlain, LL.D., President. Officers of instruction and government, eighteen. Number of students, 195; of these 67 belong to the Medical School, and 11 to the Science Class. The library has 32,588 volumes. The Cabinets of Mineralogy, Geology and Conchology are extensive and very valuable. The Medical library is one of the best in the United States, containing about 3,550 volumes.

HARVARD UNIVERSITY, Cambridge, Mass., Chas. W. Eliot, LL.D., President. Officers of instruction and government, ninety-three. Number of students in the College, 608. Divinity, Law, Scientific and other students, 553. Persons attending University Lectures, 155. The various libraries contain 187,000 volumes.

HAMILTON COLLEGE, Clinton, N. Y., Rev. Samuel Gilman Brown, D.D., LL.D., President. Faculty, twelve. Number of Students 164. The Cabinets are very rich. The College and Society libraries contain 12,000 volumes.

UNIVERSITY OF BUFFALO (Medical Department), New York, Julius F. Miner, Dean. Faculty, eleven. Students, 112.

CORNELL UNIVERSITY, Ithaca, N. Y., Andrew D. White, LL.D., President. The resident Faculty comprises thirty-two Professors, who are assisted by several special Instructors. The non-resident Faculty consists of seven Professors. The general University Faculty is divided into nine special Faculties, each of which constitutes a College. The Register contains a brief history of the University, followed by President White's Address on Agriculture and Mechanical Education, before the New York State Agricultural Society. Since its opening in 1868, the University has received from individuals, gifts amounting to nearly \$300,000. The Museums of the Arts and Sciences are full and exceedingly valuable. The library contains 7,000 volumes, to which the students have free access. Number of students, 609,

LEBANON VALLEY COLLEGE, Annville, Pa., L. H. Hammond, A.M., President. Faculty, six. Students, 136. Classical Department, 36. Scientific Department, 81. Commercial, 21.

LANE THEOLOGICAL SEMINARY, Cincinnati, Ohio, Rev. G. M. Maxwell, D.D., President. Faculty, five. Students, 33. The library contains about 12,000 volumes.

KENYON COLLEGE, Gambier, Ohio. The Faculty of Theology numbers six. Right Rev. Chas. P. McIlvaine, D.D., D.C.L., LL.D., President. Students, 15. Eli T. Tappan, A.M., President of the College Faculty, which numbers six and has 45 students. John Ogden, A.M., Principal of the Kenyon Grammar School, which has six Instructors and 47 pupils.

UNIVERSITY OF MICHIGAN, Ann Arbor, Jas. B. Angell, LL.D., President. Officers of Instruction, thirty-seven. Students in the Department of Science, Literature and the Arts, 488; the Department of Law, 307; of Medicine and Surgery, 315. Total number of students in the University, 1,110.

ILLINOIS INDUSTRIAL UNIVERSITY, Urbana, Ill., John M. Gregory, LL.D., President. Officers and Instructors, sixteen. Assistants in farm, garden and shop, four. Number of students, 277. The library contains 5,000 volumes, and an appropriation of \$10,000 has been made by the General Assembly for its increase. The lands occupied by the University, embrace about 623 acres.

WASHINGTON UNIVERSITY, St. Louis, Mo., W. G. Eliot, D.D., President. Officers of government and instruction, twenty-eight. Number of students, 747. In March last the University received two munificent gifts—one from Thomas Allen, Esq. (President of the Missouri Iron Mountain Railroad Company), of \$40,000 for the endowment of a Professorship of Mining and Metallurgy—the other from



Hon. Hudson E. Bridge (President of the Missouri Pacific Railroad Company), of \$130,000. \$15,000 for the erection of the Polytechnic Building, \$15,000 for providing it with furniture and apparatus, and \$100,000 for the endowment of the Chancellorship of Washington University, and for a Scientific Library.

HANNIBAL COLLEGE, Hannibal, Mo., J. F. Hamilton, A.M., President. Miss Jennie Walters, Principal. Faculty, four. Students, 89.

AMERICAN EDUCATION SOCIETY. Fifty-fifth Annual Report. The object of this society is to aid pious young men for the Gospel Ministry. Last year it aided three hundred and thirty-eight students—201 in Theological Seminaries, and 152 in Colleges. The receipts of the Society during the past year, were \$31,976. (Donations \$21,624, Legacies \$1,300.)

EAST TENNESSEE UNIVERSITY, Knoxville, Tenn., Rev. Thos. Wm. Humes, S.T.D., President. Faculty, ten. Students, 115.

CENTRAL NEW YORK CONFERENCE SEMINARY, Cazenovia, N. Y., Rev. Winfield S. Smyth, M.A., Principal. Faculty, fifteen. Students, 555. Gentlemen, 329; ladies, 226.

GENESEE COLLEGE, Lima, N. Y., Rev. Daniel Steele, D.D., Acting President. Faculty, five. Students, 56.

TROY FEMALE SEMINARY, New York, John H. Willard and Mrs J. H. Willard, Principals. Teachers, twenty-three. Pupils, 272. The Catalogue contains Appendix giving Mrs. Emma Willard's plan of Female Education, as published in 1818.


GENESEE WESLEYAN SEMINARY, Lima, N. Y., Rev. Herbert F. Fisk, A.M., Principal. Faculty, thirteen. Pupils, 384.

VASSAR COLLEGE, Poughkeepsie, N. Y., John H. Raymond, LL.D., President. Officers of instruction and government, thirty-seven. Number of students, 381. This Catalogue is illustrated with fine cuts of the various buildings of the College.

MOUNT HOLYOKE FEMALE SEMINARY, South Hadley, Mass., Miss Helen M. French, Principal, has a corps of twenty-nine teachers. Number of pupils, 276.

OAK HILL LADIES' SEMINARY, West Haven, Conn., Mrs. S. E. W. Atwater, Principal, has five teachers, and 72 pupils.

HARTFORD PUBLIC HIGH SCHOOL, Conn., Samuel M. Capron, A.M., Principal. Number of teachers, thirteen. This is a handsome Catalogue, and gives a history of the school from its foundation.

 School and College Officers are requested to send to the Editor their Catalogues as soon as published.

## PUBLISHERS' DEPARTMENT.

**Messrs. Estill & Co.,** of Mansfield, Ohio, have a superb steel-plate engraving, size 28 in. x 38, of "Washington Irving and his Friends." The work is copied from portraits painted from life, and embraces Irving, Sims, Cooper, Bryant, Longfellow, Prescott, Halleck, Holmes, Paulding, Emerson, Kennedy, Tuckerman, Willis, Hawthorne and Bancroft. This picture is intrinsically valuable, because it represents men of whom all Americans may well be proud. As a work of art it is quite beyond criticism. Every public and private library should have a copy. Opportunities for obtaining this picture are now becoming precious, as the original plate has become worthless, and only a limited number of PROOF COPIES now remain. These are owned by Messrs. Estill & Co., and will be sold at a large discount from the original price.

**The Art of Teaching School:** By J. R. Sypher, is the title of a new work on an ever interesting subject, by one well qualified by many years of earnest effective work in the cause of public education.

The wholly new and original treatment of the public school question will not fail to invest the work with unusual interest, and to invoke a spirited discussion of the author's views, as well as to arouse school authorities, teachers and patrons to an investigation of the character and scope of public school education.

Mr. Sypher condemns, without reserve, the abuses of the present system of education, the misuse of time, the waste of the people's money, the rapaciousness of book makers, and the false theories of education, and at the same time suggests practical remedies for the cure of the evils pointed out.

The book is altogether new in its theories, and is unlike any and all of the so-called "Manuals," "Aids," "Helps," "Guides," etc., which are merely so many reprints of old methods. This work condemns all artificial methods, demands practical education for practical people, and insists that speculative education shall be reserved for contemplative men with leisure and desire to study, solely for purposes of curiosity or culture. The public want demands precisely such a book, and an examination of its pages will convince all, that the publishers have wisely chosen their author.

It is now ready, and orders will receive prompt attention, by the publishers, J. M. Stoddard & Co., 734 Sansom St., Philadelphia. Price \$1.50.

**Penmanship in the Washington Schools.** We have received a copy of the *Annual Report of Hon. F. Osmond Wilson, Sup. Public Schools of Washington, D.C.*, dated Nov. 14th, 1871.

It is full of interesting matter, and illustrates quite completely the growing excellence of the system of public instruction in vogue in the Washington schools. Superintendent Wilson is one of the most thorough educators in the country and deserves much credit for the skill and zeal which he puts into his work. An interesting feature of his report is his remarks on the different studies pursued, and the methods of instruction used. We note particularly what he says of penmanship, and quote the following from his report:

"The Spencerian System of Penmanship was adopted by the Board six years ago, and its intro-

duction was the commencement and the sole cause of a new and a better era of teaching the art of writing.

"Teachers, at first favorably prepossessed by the grace and beauty seen in all its forms, soon discovered that the most beautiful and artistic penmanship is susceptible of a full and definite analysis; that its elements, taken separately, are so simple that a child can comprehend them, and that they can be arranged, taught, and combined gradually and progressively, until a hand-writing as perfect as the models in the text-book rewards the efforts of teacher and pupil.

"They learned from this system that teaching or learning to write is a mental as well as a mechanical process; that there must be thought as well as motion; that the prototype of every letter and every line, its exact form and proportions, must be so distinctly impressed upon the mind, that it can be described in precise and intelligible language before the hand attempts to execute. Where penmanship is taught in this manner success becomes a mathematical certainty. I have seen the copy-books of entire schools filled up with faultless penmanship, not a single one that was not superior to the best that was produced before the introduction of this system; and an oral examination upon the subject in such schools will interest as much as any exercise on the programme for examination day."

**A Musical Treat.** Peters' Musical Monthly for January, is in a new dress. It is printed on thicker paper, and is in every respect superior to its many predecessors. The selections are evidently made with great care, and it is really wonderful how few poor pieces appear among the hundreds that are given. Volume 1X. commences with the January number. Price 30 cents; or \$3 per year. The publisher offers six back numbers for \$1, and we advise all our Musical readers to take advantage of the offer. Address, J. L. Peters, 599 Broadway, New York.

**The Little Diadem;** or, Little Songs for Little Singers, is intended for Primary Schools. It is divested of all material which is required only in advanced schools. Its cheapness will facilitate its general use, and save the time usually consumed in memorizing words in the absence of books.

It is illustrated, printed on fine tinted paper, and bound in stout manilla. 73 pages. SPECIMENS MAILED FOR 25 CTS. Address J. W. SCHERMERHORN & CO. Publishers, 14 Bond St., New York.

**Mr. Martin Larkin** is about to make glad the hearts of all who have been seeking a collection of readings of unrivalled merit. For some years he has been making a most careful selection of all the very best pieces in the English language. He has observed that certain good old favorites are always in demand. Hitherto these have been secured only by a purchase of several books. He has brought these together for one volume, and to them he has added many not before published in such form. All the pieces are of the very first class. The name of his book is to be "RIVAL COLLECTION OF READINGS," for Private, Public and School Use. It will be duly announced.

## ANNOUNCEMENT.

Messrs. WILSON, HINKLE & CO., have just published :

**THE PARSEER'S MANUAL**, by JOHN WILLIAMS, A. M. Embracing classified examples in nearly every variety of English construction. Designed for schools, and for the use of private students. 12mo., 264 pp. *Retail price, \$1.00; Introduction price, 60c.; Single specimen copy, by mail, for examination, 75c.*

ALSO :

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This work is peculiarly adapted to the use of public and private schools in teaching pupils to write the English language correctly. It contains over 250 carefully graded lessons, commencing with the simplest sentences, and instructing in all the essentials to a forcible, easy style. It contains, also, full instruction on the use of capital letters, punctuation marks, etc. 12mo. 162 pp. *Retail price, 65c.; Introduction price, 40c.; Single specimen copy, by mail, for examination, 50c.*

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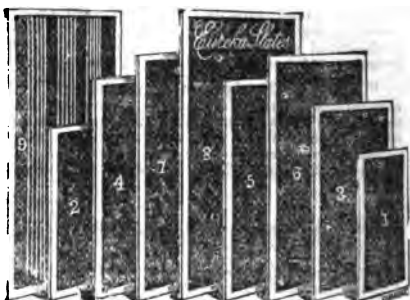
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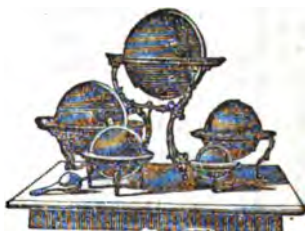
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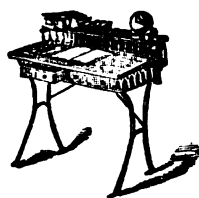
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March, 1872.

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AMERICAN EDUCATIONAL MONTHLY.

MARCH, 1872.

*SCHOOL HOUSES FOR THE COUNTRY.**



A SMALL school may be well accommodated by a plan like that represented in Fig. 1. It consists of a school-room with a single porch in front, and a wood-house in the rear. The room represented contains seats for twenty-four pupils, but by increasing the length three feet there will be room for one more row of seats, and for thirty pupils, and by increasing its width four feet, it will contain still another row of desks, and seats for forty pupils.

The porch is a single room, but of sufficient size for a lobby for cloaks and hats. The stove is to be placed in one of the niches in front, while the other niche may be used for a library. The venti-

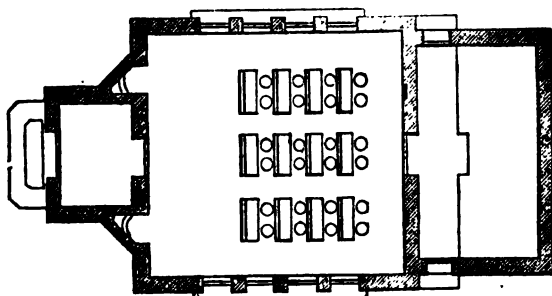


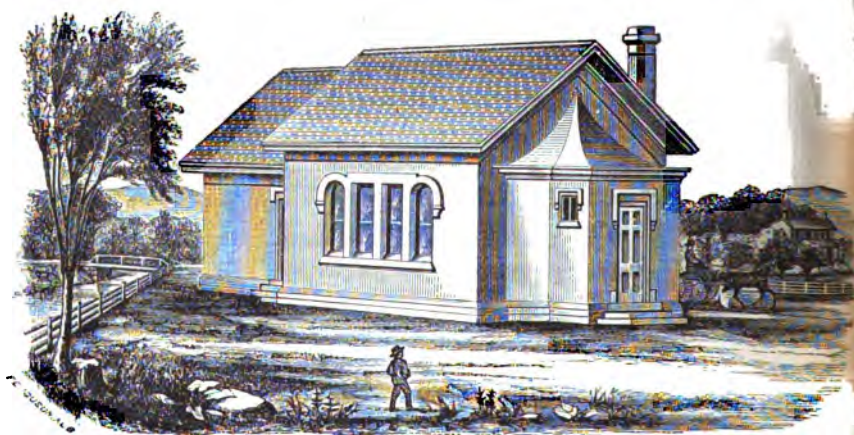
Fig. 1. Ground Plan.

* From Johnson's Complete Work on "School Houses."

lators in this, as in all the designs, are placed in the rear of the room, but each one is connected with the chimney by a tube under the floor.

The wood-house in the rear serves the double purpose of back hall or entry-way and a place of storage for fuel. The doors upon the sides should open respectively into the boys' and girls' play-grounds. The front part of the wood-house should be provided with a platform upon a level with the school-house floor, at least four feet wide.

This general plan is superior to that shown in our January monthly, in having back as well as front entrances, so that access may be had to the play-grounds and out-buildings without disturbance to classes, or to the general order of the school-room. The movements of pupils are not so conspicuous as they would be if, in their entrance and exit, they were always obliged to pass through the front door.



Elevation 1.

ELEVATION NO. 1.—This elevation is a simple and inexpensive building, with wide projecting eaves that give to it an appearance of comfort and solidity. The porch is finished with a tent-roof, to obviate the necessity of a gable under a gable. It is lighted by small windows in the sides, as the height of the roof would hardly admit of a head-window over the door. The windows are grouped together, and the whole design produces a very pleasing effect.

If a larger house is built upon this plan, the outside appearance may remain the same by simply increasing all the parts in proportion. If three feet be added to the length no other change need be made, but if the addition is made to the width the porch should be enlarged in proportion.

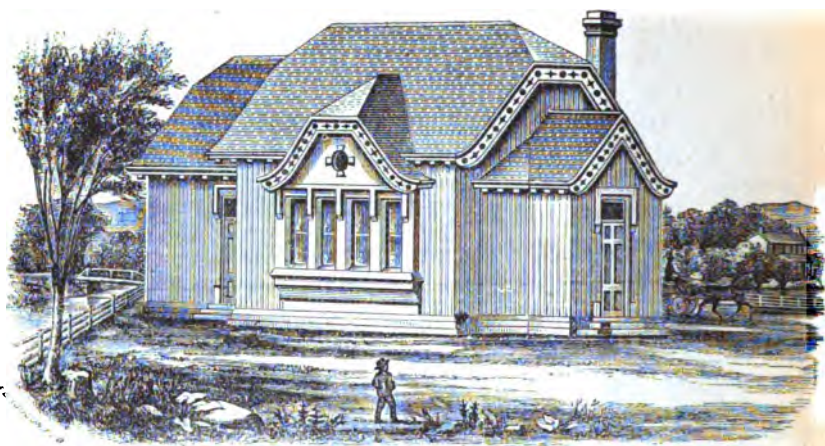
ELEVATION No. 2.—In this elevation the roof of the main building is placed at right angles with the roof of the porch and of the wood-house, giving a fine architectural effect to the group. The cornices of the three parts are upon the same level, and an ornamental cornice extends across the gable. This feature may be omitted. In case the gable cornice is



Elevation 2.

omitted the cornices of the porch and wood-house should drop below that of the main building. The porch is lighted by a head-light above the door. The materials of this building may be either brick or wood.

ELEVATION No. 3.—This elevation is more ornamental. The corners of the gable are cut off, and a small gable is erected over each of the large windows in the sides. The porch is finished with a common gable. The ornamental filigree work of the gables may be omitted, and the cornice made wide and plain, like that of Elevation No. 1. The only extra cost of this elevation is raising the gables over the windows, and in cutting down the corners of the roof, the whole of which ought not to exceed a few dollars. This

**Elevation 3.**

elevation is represented as finished with battens, but clapboards may be used, or the house may be built of brick. The superior appearance of this design will more than warrant the additional expense.

ELEVATION No. 4.—In villages and country places near cities, where the dwellings are of fine architectural appearance, the school-house should be in harmony with the surroundings, and there is a demand for ornamental designs. Elevation No. 4 has been prepared to meet this demand when a small school-house is wanted. The general features are Gothic, but the whole is chaste and neat and not excessively expensive. The steep gables all terminate in minarets or pinnacles. An ornamental bell-tower surmounts the front. The porch has an ornamental tent-roof, sloping down from the front gable. Gables are erected above the side windows, and a beautiful ornamental chimney extends upward from one side of the porch. The material may be brick or stone, the finish of the gables being a stone coping instead of a cornice. This coping may be made of wood with a covering of tin. This elevation might also be used as a session-room for a church, and for a variety of other public purposes. The roof should be covered with slate.

In some parts of the country the small number of pupils in the district is given as an excuse for a miserable school-house. The fact of a limited number of pupils may be a

sufficient reason for the construction of a small school-house, but not for a poor one. The educational wants of a small district and of a small number of children are just as pressing as though the territory and the number were indefinitely increased, and a neglect to supply them is just as detrimental in the one case as in the other. If this excuse were a good one, the State would be justified in withholding the public funds on the same ground.

But, again, it is argued that the smaller districts are often too poor to erect a respectable appearing and com-



Elevation 4.

fortable school-house. It may be that many of the districts are very poor, and in that case they are far too poor to subject their children to exposures and consequent disease, and so a good school-house becomes indispensable. Each district that partakes of the public money of the State is morally bound to provide all the appliances necessary for the proper expenditure of the money so obtained; and the poorer the district the greater is the necessity for all possible means for moral and physical advancement.

NATURAL SCIENCE IN DISTRICT SCHOOLS.

[THE following is an extract from the report of Superintendent Harris to the St. Louis School Board, on the subject of introducing a course of lessons in Natural Science into the District School course of study.—ED.]

I. IT will be conceded, I think, that we cannot teach everything in the short period devoted for schooling. Even were the period of schooling much longer than it really is, there are many things learned much better out of school than in it—many things learned much better at home, or in the field or work shop than in a school room. But with our short school period, lasting on the average for five years with us in the city, and about three years, more or less, in the country, there is the utmost need of the most careful selection of what is essential. The course of study must contain only what the pupil is not likely to pick up from intercourse with the family circle, with his fellow playmates, or with his fellow workmen. More than this, it must contain only such matters as have a general theoretic bearing on the world in which he lives, and the institutions and character of the human species of which the pupil is an individual.

II. It is clear, then, that the school must furnish the pupil theoretical insight. Here is a common ground, and it is a practical thing to give the pupil a knowledge of general elements which he may apply in after life to any one of the many trades or professions. Every boy and girl will find a knowledge of reading, writing, arithmetic and geography useful in any sphere of life that he or she may be called to fill. Whatever occupation they may follow, these branches will assist them. And what is said of these elementary branches is likewise true of the habits of character formed in a well-disciplined school, such as order, neatness, cleanliness, earnestness, industry, punctuality, truthfulness, self-respect, self-control, obedience to rule, kindness, forbearance, courtesy, considerateness, affability and politeness, sympathy and love.

III. I do not think there is much ground for dispute as to the order of these elementary studies. Reading comes first, for by it the pupil becomes able to pursue independent study and thus to add to what he receives orally from his teacher. Arithmetic may begin almost as early as reading, and writing should not be delayed at all. Geography should begin as soon as the pupil learns to read with some facility. Compared with other branches, these simplest elements are by far the most important, and nothing should interfere with their most speedy acquisition. They are in themselves the tools which assist in acquiring all other knowledge.

IV. Of man's instruments the most wonderful is language. His whole rational existence depends upon it. Some special study of the structure of this wonderful instrumentality has been found essential in all systems of education. Hence, we place the study of grammar next in importance after the four elements. History well succeeds grammar, for grammar prepares the way for it by analyzing the structure of the human mind as exhibited and mirrored in language. How the human character unfolds in time is shown in history. Knowledge of men is more important than knowledge of things, as we all find when we grow up and try to succeed in life. We learn that we can do nothing nor achieve anything without the aid and consent of our fellow men. We must, therefore, understand the springs and motives of human action, both the permanent ones and those that control temporarily.

V. Above and beyond these just named studies, which form a complete elementary course, such as has been wisely laid down by your rules as constituting the course of study for the district schools; above and beyond these follows the study of the sciences, of the higher mathematics, of those languages from which our own is derived, or which are kindred to it, and the literature thereof. These studies in their proper development form the high course of study, and are commenced in the high school.

VI. Now arises the important question: Should any or all of those higher studies be introduced into the elementary course? It is clear that in their proper form they cannot.

The study of foreign language by its structure ought to be preceded by some study of the native tongue. The study of the higher mathematics ought to be preceded by that of arithmetic; so literature cannot be well studied without a knowledge of the rudiments of geography, history, and grammar, to say nothing of reading and writing.

VII. The sciences are twofold: The human, i. e., social and political sciences, including political economy, pedagogy, and the like, on the one hand, and the natural sciences on the other. The human sciences require the highest maturity of thought for their mastery. The natural sciences, which are divided into physics (including those to which mathematics are applied) and natural history (including the sciences defining inorganic and organic nature, the elements, the plant, the animal and man), imply first a direct application of *mathematics*, and secondly, an indirect application of the same in order to comprehend the working of the instruments through which nature is observed and classified. Hence it is evident that so far as complete study and exhaustive survey is concerned, the place for the study of the sciences is in the higher course, as has been determined by the rules of the Board.

VIII. But there is a further question to settle: Can we not give those children who study five years, or a less time in our schools, some knowledge of the outlines of Physics and Natural History, which will be of great service to them in after life, and for the time being not interfere seriously with the prosecution of elementary studies?

This question I answer in the affirmative, on the following grounds: The value of all higher studies is twofold, one as giving us the practical mastery over their spheres through a complete comprehension of them *scientifically*, the other as giving us a technical mastery over their spheres, thereby adding to our general culture, or, as we express it, "general information." For instance, it is not necessary to be thoroughly and scientifically an astronomer to read with pleasure and profit the third volume of Humboldt's *Cosmos*, or indeed most writings on the subject of astronomy. But without an elementary course of some sort in astronomy those works would be sealed books. The general ideas of

a science and its mode of procedure and its technics may be acquired with little labor, nay, it may be a mere pastime to do this. On this ground we may introduce certain outlines of Natural History and Natural Philosophy into the lower grades of our schools.

To illustrate my meaning, I have sketched the outlines of a course of study on Natural Science.¹ I have followed therein the reference books provided by the Board for the teachers, and have paid special regard to the resources which they furnish. That these lessons should be oral, conducted by description and illustration on the part of the teacher, and impressed on the minds of the pupils by questions and answers, together with free conversation, seems to me the proper mode. And, inasmuch as this exercise should serve as a kind of recreation and relaxation from the regular course, I recommend that one hour be set apart for it on each Wednesday afternoon in each room of the district schools.

X. The course here recommended recognizes the two-fold division of Natural Science into Physics and Organics; and, in order that the pupil may get a view of the whole as often as possible, and may review each subject as often as he comes to a new stage of intellectual insight, it will be observed that in the seven years' course there is a spiral movement, or recurrence of the same topics: 1) The subjects of Natural Science, a) the plant, b) the animal, c) the physical elements and mechanical powers—constitute a primary course of three years; so that even those who receive the minimum of school education shall acquire some insight into the elements and instrumentalities which play so important a part in the industrial age in which they live. 2) In the fourth and fifth years these subjects of Natural Science are all taken up again in a second course and much more scientifically developed: a) Botany, its method and practical application; b) Zoology and Human Physiology; c) motion and force in masses, in particles, and as applied in the mechanical powers; d) Astronomy (forming a transition to the grammar school course in Physical Geography). Five

1 Which will appear in our next.—Ed.

years is the average attendance on our schools ; hence the average pupil will get two courses in Natural Sciences. 3) In the sixth and seventh years of the district schools a third course in Natural Science is given, in which begin to appear more clearly in outline the several sciences. a) Under Natural History or organic nature : Geology, Meteorology, Botany, Zoology, Ethnology. b) Under Natural Philosophy, or Physics : Matter, force and motion, machinery, molecular forces and instruments involving their application.

THE SONS OF PESTALOZZI.

FROM THE GERMAN.

CHAPTER XIX.

LIENHARD NESSELBORN'S father had hesitated for some time, before sending his granddaughter to the Waldenburg Seminary, a chartered institution in which females were fitted for the teacher's profession. This hesitation arose from his unwillingness to entail upon his grandchild the hardships and trials of this calling, and partly from his doubts whether women ought to be teachers. In his perplexity he had solicited the conscientious advice of his son Lienhard, who had answered him as follows :

"I have always been of the opinion of Pestalozzi, our great master, that the school ought to be a continuation of the family, and that the teacher should act as a representative of both parents, in the strictest and truest sense of the word. I myself felt within me this yearning of my heart towards my pupils, this spark of holy love for every one of them, strangers as they were to me in the world. For me, the school-house was but another home, another domestic hearth. And why should not woman preside there as well as man ? But still, how fearful was the lesson that Providence seemed to teach our noble master, Pestalozzi ? Gertrude, his faithful friend and assistant, the very type of woman-teachers, who had married the most gifted of his

instructors, became the mother of an idiot! A Frenchman has lately pronounced every woman to be sick by nature. He might have said that every woman seems to be under the influence of a peculiar law, humiliating perhaps for human nature. By force of this law women are sensitive, nervous, uneven, eccentric, even in their virtues. Thinking of female teachers as an institution, I cannot repress a feeling similar to that shudder which I always experienced in South Germany and Switzerland, when observing there the great number of female functionaries employed in telegraphic bureaux, in post offices and as ticket agents at railroad stations. I surely do not doubt their abilities, punctuality, and general trustworthiness. I do not agree with Dr. Wehrmann, one of my teachers, who has compared those female officials with green-finches, trained to pull up their food in little carts to their cages. He thinks women to be endowed only with a kind of *quasi-intellect*, as he calls it, which would make it impossible for the authorities ever to rely on the returns of such 'responsibilities in crinoline.' But the cause of my repugnance to such practice is in the displacement of the boundary between home and world; in the fading away of that charm which the sentiment of ages has thrown around the secluded and, as it were, veiled life of women; in the defiance which women begin to hurl at the whole male sex, which must fail, in making emancipated Amazons contented and happy; in the transfer of woman's life, the proper sphere of which is in the heart and soul, to the dust and mire of every-day life. However, as we cannot make the world anew, but must take it as it is, we have often to make a virtue of necessity. We hear everywhere complaints at the scarcity of male teachers for common schools, the inadequate remuneration deterring young men from following this profession. Let us, then, honestly try to engage women in a vocation which, certainly, is the least hazardous of all kinds of emancipation."

The consequence of this letter had been Gertrude's entrance into the Seminary, the stern and rigorous discipline of which had imparted to her mind a maturity far beyond her years. She had entered now upon her duties in her uncle's institution, in which, since it was a boys' institute,

she could, of course, not be employed in the capacity of teacher. She had been assigned to the direction of the economical department, and her keen eye soon discovered that reforms were needed in almost everything. She resolved to carry them out to the best of her abilities. Her position enabled her to trace the existing disorders to their very sources. Her aunt was one of those strange beings who, while perceiving defects and injurious practices, nevertheless declined to remedy them, and even disliked to have them mentioned. For mending faults would involve the acknowledgment of their existence. Instead of it she had contracted the habit either of explaining appearing grievances away, or of excusing them by the character of the persons whom she had to employ as her instruments, and who, according to her theory, ought to be taken as they were, not as one might wish them to be. "Please, dear," she said to Gertrude, "do not let your laudable zeal for abating nuisances go so far as to necessitate a ceaseless change of our people. As matters stand, we have to suffer enough from these hateful changes. For ours is a private institute, which cannot hold out to young teachers such inducements of future promotion, as the institutes of the State. Teachers will accept positions in our school only for short periods; they will leave as soon as they can do better, and new teachers must be appointed in their places. It is almost worse with the domestics. Servants are invariably bad. If we would have eyes for all their shortcomings, the changes would have no end, and the new servants, perhaps, would do worse than the old ones. The best maxim is, not to strain at gnats. Many a bad servant I have reformed by ignoring or generously condoning disorders that had come to my knowledge, and you had better follow my example."

Although Gertrude had promised to profit by these hints, she nevertheless came into daily conflict with the powers that be. These ruling powers were not her uncle or aunt, but the selfish course taken by almost every one in the house, the negligent ease of the boarding teachers, the spirit of insubordination among the students, and the guilty complicity of the servants in all manner of irregularity. The care for Theodore Waldner was not the least of Gertrude's

assumed duties. Not only did she provide for his physical wants, but she tried also to replenish the stores of his mind. In this respect she had an invaluable support in Fritz Bechtold, one of the boarding teachers. This young man, who had become tenderly attached to Theodore, did all in his power to supply the many deficiencies which a "posthumous education," if we may so call it, had left in Waldner's knowledge. Bechtold taught only the lower classes, and being nothing but a "Normal School graduate," was treated with little regard by the "learned" gentry of the institution. But Gertrude's uncle, to her keenest joy, had justice enough to appreciate the young teacher's merits. "They are all not worthy," he would say, "to unloose his shoe's latchet. While these philologists are swollen with pride and arrogance, they have no clear idea in their brains, and no inspiring words ever go fertilizing from their lips to the hearts of their hearers. And yet they denounce in their classical arrogance our worthy elementary teachers as overbearing. It is simply because these latter have sense enough to know that scholarship and teaching are two different things. Our Professor Tipfel is an authority as to the Latin poets, but in all other respects his mind is filled with utter confusion. Wehrmann pretends to be a universal genius, considering himself competent to teach any subject whatever, and yet he is unable to make even the simplest Euclidean theorem clear to his pupils. Magister Schlickum has acquired *his* method, by teaching counts and princes as their private governor. But a private tutor he will remain all his life. He will never be able to teach in that boldfaced type which alone is understood and appreciated by large classes. Bechtold's teaching, on the contrary, is as if cut in granite. For him, the short allowance of his knowledge is like a well packed knapsack for a traveler. Everything is handy to him, and he knows where to find all he wants at a moment's notice, while your big tourist with his endless baggage train is ever at the mercy of circumstances, and can never find what he is looking for. Just so short cut is Bechtold's way of keeping discipline. His very words are deeds. There is no occasion for him to retract anything. He simply commands, and the student obeys, while in Tipfel's, Wehrmann's

and Schlickum's classes the students do nothing but argue with their teachers. No order is ever executed precisely as it has been given. And no wonder, for Mr. Tipfel, during the recitation, is thinking of his last criticism in Jahn's "Jahrbücher"—Mr. Wehrmann's mind is full of his last purchase of books, and Schlickum is engaged in reviewing the brilliant display of his scholarship at Mrs. Nesselborn's last tea-party.

In the portrait which Mr. Nesselborn had drawn of Professor Tipfel, there was one most ludicrous feature omitted. This scholar considered himself the model of a pedagogue, and discipline was the third word in all his conversations. Indeed, if the art of discipline consisted in blustering, scolding and shouting, Prof. Tipfel would have been the most consummate of disciplinarians. He had been, of late, a professor in a public gymnasium, which position he had resigned, partly in consequence of a rich marriage, partly on account of difficulties with his chief, who had reviewed one of his late publications with cutting sarcasm. Afterwards Nesselborn had succeeded in winning Prof. Tipfel for his institution, and prided himself not a little on the acquisition of a man considered the greatest living scholar as to Latin satirists. He was of dwarfish, ungainly stature, which made the outbursts of his anger irrepressibly ludicrous. From his perpetual blustering and scolding, he was nicknamed Jove the cloud gatherer; but his Olympic thunders were only empty sounds. He noticed absolutely nothing that was going on in his class. Thus he neither knew that he was perpetually laughed at by his students, nor was he aware that they had firmly established the practice of passing to each other "ponies," or those printed "Preparations" which a fiendish enemy of education (his name, strangely, is Freund)¹ has launched into the world. It was almost grotesque to see how this Olympic Thunderer would pass into the language of common mortals whenever the gravity of the school was interrupted by any event of out-

¹ FREUND (friend), the notorious compiler of the Latin Lexicon, which Dr. Andrews took the trouble to translate into English, one of the worst educational and philological scribblers, has compiled so-called "Preparations," calculated to supersede almost all hard and serious study—very similar in character to the publications of certain American houses, pretending to teach "History," "Chemistry," etc., in ONE TERM.—*Translator.*

side life. If rain or hail suddenly began to fall, or if a bird would light on a window sill—reminding the nervous little man of the ill-omened auguries of ancient times—or if a lamp or the stove would smoke, this Jove or Juppiter (upon which spelling he rigidly insisted) would become a perfect child and show himself a most helpless being.

A characteristic incident had happened on the day when young Count Linsingen had been sentenced to “twenty-four hours Carcer.”⁴ Professor Tipfel had caught a severe cold in his head, which he attributed to some gross mismanagement on the part of Mrs. Nesselborn out of spite against him. He was in the passage-way, loudly expostulating with some domestics, in utter disregard of section 8, of the school regulations, according to which “all noisy talking in the corridors” was strictly prohibited.

“I am not going to lose my life and health in this house. That scrubbing of my room, and the indignities heaped on me—”

“What is the matter, Professor?” he was asked by some inmates of the house who were attracted by the noise. But the Professor, being caught by a violent sneezing fit, was unable to utter a word. In the meanwhile Mr. Nesselborn had joined the party. He had been just informed by his wife that Count Linsingen was going to complain to his father of the punishment inflicted on him, soliciting his removal from the institute. Scarcely was this news communicated to him, which was by no means apt to improve his humor, when Prof. Tipfel’s scolding voice struck his ear. He requested the Professor to step into his study, but allow his sneezing fit to subside before giving an explanation. But Tipfel took this advice for an insult, and his anger, as far as his sneezing would allow him, burst out with the greatest violence.

“Mr. Director,” he exclaimed, “to-day, you know—*peshee!*—is Monday. The last recitation I heard, was Horace’s Epistles, on Saturday last from 11 to 12. I concluded the lesson with the jest of the great Venusinian—*peshee!*—‘The philosopher is everything, the king of kings, free, full of honor, beautiful, and healthy withal—*peshee!*—unless he should happen to have a cold in his head’—for thus I interpret the

words *nisi si pituita molesta est*. Having explained this passage, I proceeded—*peshee!*—to examine the written lessons of the class, and found that the translations of six of the day scholars and two boarders were most miserable. I ordered them—*peshee!*—to remain in school till one o'clock. On my way home, I entered—*peshee!*—a book store, and after making there some purchases, whom should I see—*peshee!*—but my six day scholars, passing saucily by the store. I rushed out immediately, and stopped them. *Quo terrarum?* asked I. They said, Mrs. Nesselborn had sent them away, because the classroom had to be scrubbed. Good!—*peshee!*—I had to submit of course. I am used to that. But this afternoon—you know I have no lessons to give on Monday forenoon—when I stepped into the room, the odor of burnt junipers¹ met me. I know this odor. Already the ancients knew and dreaded it! *Juniperum metuens*—has a satirical fragment of Hadrian's time. But when I repeated the end of last lesson to introduce the recitation—*peshee!*—the words *nisi si pituita molesta est* became a dreadful truth; for I had soon to sneeze, not once, but three, four times! I directly ordered the windows to be opened—*peshee!*—but as it was hailing, they had to be closed again. Now, sir, the fact is that the room had just been scrubbed, had been overheated, and filled with pestilential vapors—"

"But, my dear sir," interrupted Nesselborn, "you forget that the scrubbing had already been done on Saturday. How was it possible, then, that to-day—"

"No, no, no!" cried Tipfel after another sneezing paroxysm. "That is just the unheard of fact, the *scelus infandissimum*, the outrage, sir, which provoked me no less than my sudden cold: On Saturday, the room was *not* scrubbed, do you hear? *not* scrubbed. But Mrs. Nesselborn had my room scrubbed just before my recitation to-day, which was evidently meant for a *demonstratio ad oculos, ad aures et nares*—*peshee!*—that her dismissal of my delinquent boys was a purely arbitrary act on her part, a perfect *sic volo; stat pro ratione voluntas*, another *tel est mon plaisir!* I demand satisfaction, sir! I often had, in this house, to silence the voice

¹ These are commonly applied in Germany to counteract the vapors of freshly scrubbed rooms.—Translator.

of self-respect, but the preservation of my life and health, sir, is a duty that I owe to my family!"

With these words the Professor rushed out of the room. Nesselborn called after him to propitiate, if possible, the angry man. But his efforts were in vain, and he threw himself in despair on his sofa; for he knew that Tipfel, who was perfectly independent would most probably send him his resignation, an issue which he anticipated with dismay, since the name of the renowned scholar induced many parents to send their children to the institute.

At this moment Gertrude entered the study to bring him his afternoon coffee. Mrs. Nesselborn had left the house to make some calls.

"How is it with little Horace Gordon?" asked her uncle. This boy, who had come from England, being entrusted to Nesselborn's special care by his parents, was lying dangerously sick of the typhus fever.

"He is delirious," she answered. "The doctor ought to call oftener, I think."

"Mrs. Bröge is with him, is she not?" asked Nesselborn.

"Mrs. Bröge is the poorest nurse in the world," she replied. "I think, I ought to take her place in the sick-room to-night."

"No," said her uncle. "Let Mrs. Bröge do her duty."

"The doctor is very negligent, indeed," she continued.

"Staudner negligent?"

"You ought to take another physician."

"For little Gordon, you mean?"

"No, in general!"

"What do you mean? Staudner is my oldest friend."

"In this house you have more important duties to fulfill than those of friendship."

"You only wish to get out of the house all the people that you found here."

"Only those that are good for nothing."

"Do not judge! Nothing in the world is perfect!"

"That is a mistake. A medicine, for instance, *must* be perfect, or else the government will close the shop. A physician *must* be always the best we can find."

"But Staudner is one of the most popular physicians."

"Yes, with men and women of the world. But for your institute Staudner is *not* the right man. The physician of an institute ought to be a man of dignity and self-respect."

Nesselborn, to change the conversation, pointed at one of the statuettes in the niches of the room. It was that of Æsculapius. With reference to the bald head of the healing god, he said :

"Does not Staudner look very much like that statue?"

"I wish he would look like that other one," replied Gertrude pointing at a manly, tall figure which had a paper roll in one of his hands, while both his arms, with inimitable grace, were holding the folds of a Greek cloak."

Nesselborn smiled, and said :

"Yes, my child, that statue *is* beautiful. The scholars say that it represents Demosthenes; but they are mistaken. No ancient sculptor would have ever given such a position to Demosthenes. No orator, in the fire of his eloquence, can stand thus with such a neat and regular drapery of his cloak. The reality of life follows other laws, my child, than our theory. It is precisely our own case. If you will continue aiming at an ideal state of things, at which, in our circumstances, we can never hope to arrive, you will only live to be disappointed, and poison the happiness of your life."

Gertrude stood quietly for a while, fixing the statue with her intelligent eyes. Then she said :

"And yet, uncle, it *is* the great orator. The artist has only chosen the moment when Demosthenes is preparing in his own house for the great battle that he is going to open on the tribune. Just see! He is looking once more over his notes. He has dressed carefully with a decent regard for the great audience he is about to address. The very folds of his drapery are expressive of that clearness and systematic order which are the first requisites of every composition."

The uncle nodded a silent assent. After a pause he said sadly : "I am very, very unhappy, my dear child! Heaven knows that my intentions were pure! My institute was to assist at the great work of ennobling the human race. It was part of my plan to sow the seed of nature and humanity among those higher classes which of all others have always

been least disposed to acknowledge the worth of man as such! And now I must confess the truth of the known Horatian words, 'Worse are we than our fathers, but will die *relicturi progeniem vitiosorem*—' which means—"

"I know what it means. But these are the words of a heathen. We Christians have a different faith."

"You mean that we ought to believe in an education of the human race by God?—Perhaps, but what do the works of man amount to? What is the fruit of all our teaching! It is like pouring water into the tub of the Danaides, or like the labor of Sisyphus! Wherever I turn my eyes, I see weeds of a man's size, and under them growing—dwarfish wheat!"

"It is your own fault, dear uncle!"

"Have I God's own messengers to assist me? Must I not till my field with the common, universal plough!"

"You will always find tolerable persons to help you. Put these in the right place. Support their measures by your own authority and dignity! Remove such of your scholars as are setting bad examples! Turn out every one of the domestics. Janitor Bröge ought to be sent out of the house this very day."

"He has always been honest and conscientious in collecting my school fees."

"One single good quality cannot make up for a dozen bad ones. He has made advances to the Roumanian Princes, and taken their notes for double the amounts."

"My former janitors had other faults."

"His wife is secretly forwarding the correspondence of your boarders which they are forbidden to maintain."

"I cannot be a spy on my own pupils, and must rely on their honor."

"But *dishonor* has got the better of honor in this institute, and will force you from one false position into another."

"What shall I do, if Tipfel resigns?"

"Let him go, and fill his place with the young man that has lately applied for a position."

"You mean him that has been a tutor in the de Fernau family? Do you not know that he has abruptly dissolved his connection with the Fernau's, and that they are greatly dissatisfied with him?"

"Yes, because he refused to hush up the misdeeds of his worthless pupils."

"You know, I have a mortgage of \$20,000 from the Fernaus, and I must not give them a new cause of finding fault with me: for Waldner's presence is a thorn in their flesh. So much they have given me to understand already."

"Let it rankle deep, deep, that thorn," said Gertrude. Her eyes flashed for a moment, shooting the petrifying glance of a Medusa. There was nothing in her then to betray her menial position. Had she worn purple and silk, she would have looked a queen. Her nostrils dilated, her lips closed, and the marked outlines of her plastic face bore the expression of classic antiquity.

At this moment the door opened, and a hoarse, repulsive voice betrayed Staudner's presence.

Gertrude measured him with a glance of infinite contempt. "Beware of that man, uncle," she said aloud, and left the room. Staudner, bewildered, looked after her with his fishy eyes, widely opened over his blue glasses. Then he approached Nesselborn to report on the condition of little Gordon, whom he had just visited.

FEMALE EDUCATION.

THE training of the young is undoubtedly one of the main employments of women. In spite of all modern political agitation for adding to woman's responsibilities, no duty can ever be so important and so noble as teaching. In every rank, during the first two years of a child's existence, its mother must be its chief instructor. In the better classes of society it is usual for the mother to superintend, if she does not altogether conduct, the education of her family until they are all several years older. Such being the case, it is evident that the services of the mothers must be secured if we are to have proper female education. It is also equally obvious that if the education and training of the mother herself has been neglected, at first as a girl, and afterwards when a woman, the influence for good, which she should

bring to bear on her children, must be very materially diminished.

Three practical questions then arise, namely:

1. How is the present race of mothers educated? 2. What results follow from the existing condition of their education? 3. How can the plan of their education be effectively improved?

I. Without wishing to speak disrespectfully of the gentle sex, it must be boldly stated that their education, as a class, is woefully neglected, and that, such as it is, it is utterly unfitted to the duties and circumstances which they will be called to fulfill in the years which follow their childhood and youth. In this respect, strange as it may seem, the condition of what are called the higher classes is worse even than that of the industrial classes. It is almost true, as a rule, that the higher the social scale, the worse in quality is the education given to the daughters of a family. The instruction given at the present time to a girl in a common school, if insufficient, has generally about it something practical which the "young ladies' schools" might often imitate to advantage. As the public school system grows more thorough, it is likely this difference in quality will become greater; and, unless the private schools improve, it is to be hoped such will become the case. The teaching at the District and Ward schools is really immeasurably beyond nine-tenths, if not ninety-nine hundredths, of the Seminaries and Institutions, from which fathers receive such elaborate bills, and such reports of their daughters' instruction, at the end of each session.

The reasons for this are not difficult to discover. Common schools are regulated to a great extent by practical laws. The mode of teaching, the changes in management, books used, and subjects taught, are matters of deep concern to the public, and are consequently looked after by competent and practical officers, who owe a duty to the State in seeing that its laws are properly administered to the public good. They are mostly impartial persons who have made the subject of schools their study. In the case of private schools such is not the case. The persons who keep them are dependent on popularity for their living, and

are, accordingly, obliged to suit their instruction to the wishes of the parents. These are, in fact, the employers of the teachers, and they purchase what education they think proper and most desirable for their daughters. This means that what is fashionable is the ruling power in dictating the course of instruction to girls.—Fashion is at best but a dangerous guide; and at the present time, as I shall more fully consider further on, it is leading the education of girls in a pernicious course.

It may be argued that such a system prevails in all private schools for boys. Here parents equally direct the course of instruction, but with different results. It is true that the long continuance of the teaching of the classics, to the exclusion of most other subjects, must be attributed partly to this feeling, as is shown by the fact that "Classical" schools are even still considered "fashionable." As a general rule, however, parents try to educate their boys so that they may be fitted to get their living as early and as readily as possible. Girls on the other hand are but too frequently brought up to be fashionable. Their occupation is to be fashionable; without that it is feared they will stand no chance of success in life. Attractive accomplishments, however superficial, are more showy than solid merit; and no doubt mothers display a good deal of knowledge of the world when they calculate on such things as setting their daughters off to the greatest advantage.

The highest aim at hundreds of "Female Institutions" is to impart to the pupils a superficial knowledge of Music and French; and when Italian can be added, if only enough for a few songs, the school takes rank at once as a finishing establishment of high order. Doubtless all these subjects are desirable; but the evil is that they are taught to the neglect of sound instruction in elementary subjects. A large number of girls brought up—they cannot be called educated—at what are looked upon as fashionable, first-class private schools, would be unable to pass such an examination in arithmetic, reading, and needlework, as the majority of the girls at any one of the Girls' Grammar Schools of New York City qualify in, as a matter of course, before they leave that school. Drawing and fancy work are

usually among the polite subjects of instruction. The former, however, is very rarely well taught. The drudgery of learning is avoided. Perspective, free-hand drawing, and the elementary training of the hand and eye, are often not thought necessary. As all girls are not naturally artists, copies have to be given far beyond the power of the pupil, but which may be sent home as specimens of the teaching of the establishment. These drawings are frequently touched up by the teacher, and arranged for home inspection, to the admiration of the parents and the gratification of the child, who is often amazed at the improvement in the landscape she has toiled over so long, and every detail of which she has become so tired of alternately putting in and rubbing out. Fancy work, though no doubt desirable in its proper place, is taught to the entire exclusion of plain work; and teaching the art of darning a hole in a damask tablecloth, not to venture to mention the same operation on a very important article of clothing, is almost extinct among most of the so-called superior schools of the present day.

Girls thus brought up are becoming the mothers of the rising generation; and, in spite of the progress which education is making, and bids fair to make, within the next few years, there is unfortunately little or no prospect of improvement in the upper grades of society, so long as the existing sentiment continues.

I do not wish to imply that the methods of female education have fallen away from any perfect condition in which they existed in former years. It is the habit of some persons to think that, in the good old days long gone by, things were always better than they are now, and many parents may be heard to bemoan the inferiority of the schools to which they have to send their girls now to those in which they themselves were brought up. It is feared, however, that the ladies' seminaries of the past were not much better than those of the present, if even they were so good. One exception, perhaps, must be made: common needlework was formerly more thought of, and in this we have gone back. The consideration that girls' schools are not altogether degenerating, but have really always been deficient, is serious from the conviction which must follow

that not only is an improvement necessary, but that a completely novel system of education must be successfully brought about, if the desired end is to be secured, and if girls are to be educated in such a manner as their position, their abilities, and their duties, render not only desirable but really essential to the well-being of the community.

II. *The results which follow from the present condition of female education.*—The evils of the way in which girls are brought up are two-fold. Not only is it a great injury to the girls themselves to deprive them of the ordinary benefit of education, but it also acts in a very serious manner in tending to prolong the reign of ignorance, inasmuch as those who must be the first instructors of all are quite incompetent to perform their most obvious duties towards the rising generation. With the industrial classes this acts in a number of ways to the detriment of the household. The girl on leaving school at a tender age is either busily engaged at some steady employment in factory, mill or shop, or else she helps her mother at home. In the first case she learns absolutely nothing of her domestic duties; in the second, though she picks up what she can from the experience of her parent, that parent's previous training renders her but a poor instructor. She usually marries early, and is consequently as ill-fitted for the management of her family as her mother was before her. Her household becomes disorderly, she cannot manage the family income to advantage, and to these circumstances not a little may be attributed of the unsatisfactory condition of many homes, and the commencement of discord between husband and wife.

In the higher classes of society the effect of this deficient education is different, but the evil is no less serious. The mother is altogether ignorant how to set about training her children, and the most valuable time of infancy is often allowed to be spent almost entirely under the guidance of servants. In not a few cases young mothers really begin their own education from an attempt to instruct their offspring. Nothing, perhaps, makes people feel their own weakness more acutely than the attempt to teach others, and to answer the numerous questions of intelligent little pupils. Besides the very important consideration here re-

ferred to—namely : the loss which the children sustain—the young wife, as usually brought up, is unable to join in many topics of conversation, or to be interested in the numerous subjects which enter into the daily work and duty of her husband. This is an evil. It is not intended to argue that every woman should be bored with all matters which arise in her husband's daily routine, but she should be so educated that he may feel her to be capable of entering into his plans, and being interested in those matters which chiefly occupy him. It is detrimental to all mutual happiness and confidence if a man feels that his wife is too low in the scale of intellect for him to open his lips on any point beyond the beauty of her dress and the doings of her neighbors.

The large amount of gossip and small talk which exists among the females of all classes may be attributed to their inability to converse on anything of a more elevating nature. How is it possible for nine-tenths of those who have been brought up at the young ladies' seminaries to find interest in anything beyond the merest commonplace subjects? There are thousands and tens of thousands of ladies, the wives and sisters of educated men, who are ranked amongst the intellectual classes, and whose literature never goes deeper than a novel, and who do not care even to read a newspaper (unless it be "Society" papers) much less to take the slightest interest in the general topics of the day. It cannot be said that they are altogether to blame, though it may be a question whether the husbands of such ladies are free from all responsibility. A husband should not be content to permit his wife to remain thus, even if, after the honeymoon has passed, he finds that he was mistaken in supposing that a beautiful face always implies an equally cultivated mind.

In the matter of dress-making, house-keeping, cooking, and such like domestic essentials, the absence of education affects the poorer classes more, of course, than the rich. There was, it is said, a time when the highest lady thought it not beneath her to understand the culinary arts, but perhaps those days, like Burke's days of chivalry, have gone forever, and only exist in the memory of the past. With the poorer, however, such matters assume the importance of an econo-

mic science. Dickens' graphic description of Dora's house-keeping, in "David Copperfield," is not far from the actual truth in thousands of cases. In the arrangement of dress; in the judicious and economic selection of suitable articles, great waste comes from ignorance of the properties and uses of different materials. Very few girls have any idea of cutting out clothing, or are practised while at school in "turning and altering," and other essentials for a really thrifty and managing house wife.

Looking, then, at the condition of society in all its branches, it must be acknowledged that though woman forms the prominent character in all domestic matters, and though her education must have a most important influence, and must affect the whole nation, yet it is in a most unsatisfactory condition. Their deficiency, on careful investigation, is but too evident; and the evil consequences, though so serious, and so universal, are yet so old that society scarcely notices them, and can hardly appreciate the extent of the benefit which a reform, or rather, a revolution is capable of producing.

The practical improvements necessary will be considered in another paper.

G. R. C.

THE NEGLECTED LUXURY OF SPELLING.¹

DICKENS in "Our Mutual Friend," when describing the number and variety of begging letters, which, upon coming into his fortune, the owner of Boffin's Bower received, remarks with one of his inimitable strokes of humor: "Among the correspondents were several daughters of general officers long accustomed to every luxury of life except spelling." Now, I fear that the sarcasm with which our English author demolishes at a blow the false pretenses of these young ladies would not by any means secure the like conviction in our country, for I have known bona fide daughters of general officers in America, who, if their title to the position depended upon correct spelling, would disgrace it every time they took pen in hand.

¹ Miss Blanche Berard in Conn. School Journal.

This was not so in the old time before us. Our grandmothers knew how to spell. Among their school exercises, besides the ordinary daily lessons, there were what might be called *field days* for the practice of the then honored art. The scholars dividing into two parties, ("choosing sides," as it was called), were ranged in lines facing each other. The words were then given out, and the lively contest of "spelling down" begun. Each one who missed a word was obliged to fall out of line and take his seat, until by degrees only a few champions remained on either side; the high honor of standing alone occasionally falling to a single individual. Of course the match was won by the side which exhibited the greater number left standing when the lesson was finished. This was only one of several devices to secure attention to this humble and elementary, yet most important branch of education.

But now, alas! in the matter of orthography we have fallen upon evil days. The good practices above described exist to some extent still, in a few country district schools, perhaps, but in general they are falling more and more into neglect. Much of our modern culture is merely for show, and under the thin tinsel of supposed acquirements in other languages lie strange deficiencies in the knowledge of our own.

In our schools, generally, too little importance is attached to the study of orthography. No pains are taken to secure its being taught; and, in fact, one would think, to examine the programme of studies, that now-a-days children had grown so clever that what used to take time and labor to teach would come to them by a sort of instinct.

In support of the assertion that attention to spelling is woefully neglected in these days, I will cite the following fact: Within a week I have received two letters, the one from a middle-aged country woman, living at an obscure place called Bean's Corner, in the State of Maine. She has probably but the slightest pretension to what in these days is called education, and yet her letter has not a single misspelled word in it. The second letter alluded to is from a descendant of one of the oldest and best families in America, a lady of many accomplishments and high culture, and

yet her letter exhibits several gross mistakes in the spelling of words of common every-day use.

Apropos of this subject, a friend tells me that he knew a young man of excellent family and social standing, who was engaged a short time since as a book-keeper in a retail grocery. His penmanship was admirable, his arithmetic adequate to the position, and yet "eggs" were transformed by him into "edges," "pails" into "pales," "pepper" into "peaper," with many other equally atrocious perversions of orthography, until the end of the first week brought the notice that his services would not be required for a "spell."

The same friend informs me that he once attended a course of lessons in penmanship by one of the foremost teachers in this country, whose copies were so often misspelled that they furnished a fruitful subject of ridicule on the part of the pupils.

Perhaps the following Lament, found in the portfolio of a maiden aunt, may amuse your readers, and serve as an appropriate ending to this "scold" about the wretched spelling of these degenerate days :

My dear nephews have all passed through college,
And their sisters of school honors tell,
But, alas ! amid all their fine knowledge,
There's not one of them knows how to spell.

You would think Jim as learned as a Rabbi,
His collection of books could you see,
Yet he writes home from France that an "Abbey"
Is teaching him French "à Parreé."

Pretty Fan, who has gone on to Venice,
Into raptures at everything flies,
But especially glowing her pen is
When describing the famed "bridge of size."

With Donald and Duncan, twin darlings,
Spelling fares no whit better I fear ;
For they write me that soon at McParlins,
They will enter a "buisness carreer."

Yet these are all children of mothers,
Who in days that are gone would surpass,
In the triumphs of spelling, all others,
Standing off'nest the head of the class.

GEOGRAPHICAL NOTES.

UNITED STATES.—The *Hassler*, a vessel built for the coast survey work of the Pacific coast, left Boston Dec. 4, 1871, for California *via* the Straits of Magellan, having on board Prof. Agassiz, Count Pourtales, and several scientific associates, whose object is deep-sea dredging, the fruits of which in European waters have lately been so important to geological science. Before setting out, Prof. Agassiz addressed to Prof. Peirce, superintendent of the Coast Survey, a remarkable letter, in which he stated distinctly what organisms he expected to discover at the bottom of the sea, and the proof he expected to derive from them of the immutability of species and the consequent falsity of the Darwinian hypothesis. This letter is printed in full in the *American Naturalist* (Salem, Mass.) for January.

—The report of the Chief Engineer of the Army to the Secretary of War, lately laid before Congress, gives a detailed account of deep-water dredging last summer in the course of the Lake Survey, particularly on Lake Superior, under the direction of Gen. Comstock. The deepest water met with was 169 fathoms.

—Under the protection of an escort of seventy-five infantry, detailed by Gen. Pope's order, Prof. E. D. Cope, of Philadelphia, occupied seventeen days of palæontological research, chiefly on the Smoky Hill Fork of the Republican River, in Kansas—one of the richest regions of the world in fossil remains. Many novel and gigantic skeletons, or fragments of skeletons, were discovered.

—Still another exploration, which we owe to the War Department, is that of the sources of the Yellowstone River. Readers of *Scribner's Monthly* will recall its interesting articles on this wonderful region, which has formed part of the Territorial Survey under Prof. Hayden, with results of which we have still to await the publication. The ground traversed by Capt. John W. Barlow, therefore, last summer, was not wholly visited for the first time. Copious extracts from his report to Gen. Sheridan were

published in a supplement of the Chicago *Evening Journal* for Jan. 13. His party consisted of a brother-officer of the Corps of Engineers, U. S. A., and of a topographer, assistant topographer and recorder, and photographer, together with twelve men, transportation, etc. Their object was to ascertain if a road was practicable from Fort Ellis to the sources of the Yellowstone, and thence across the divides to the Snake River Valley on the one side and the Wind River Valley on the other. The Snake River connection was deemed practicable by Capt. Barlow, but the other seemed more doubtful, though worth exploring, inasmuch as the natural route of connection between the Union and Northern Pacific Lines is by way of the Wind River, the divide offering the only serious obstacle. The expedition set out from Chicago on July 2 for Corinne, Utah, where they left the railroad and proceeded north to Fort Ellis in Montana, their base of operations. On the 16th they left the Fort in a south-easterly direction through the Bozeman Pass, and on striking the Yellowstone, followed up it and its tributaries to the famous Falls, surmounting which they came upon the most extraordinary geyser region in the world. Descriptions of the various hot springs, wells, volcanoes and geysers here met with occupy a large part of the report. The temperature of the sulphur springs ranged from 128 to 199 degrees; the columns of water ejected by the geysers reached observed and estimated altitudes of 130 to 200 feet. The mud springs are remarkable for the colors of their deposits—from "pure white, capable of producing the finest porcelain," to green, pink, orange, vermillion, and other hues. The Yellowstone Lake is 7,500 feet above the sea level, is very irregular in outline, and about twenty miles across. Its shores are so heavily timbered as to make the circuit of it difficult. The lofty mountains which encircle its basin form a watershed, in which the principal river-systems of the western half of the continent take their rise. The Falls of the Yellowstone are sixteen miles below the outlet of the lake, and are thus described:

"There are two falls. The upper has a sheer descent of 115 feet, and the other, half a mile below, falls from the crest of a vertical precipice 350 feet into the grand cañon. The beauty of the upper fall and the grandeur of the lower one are without parallel. For several

hundred yards before reaching the brink of the upper fall, the river descends over a series of cascades. The solid rocks on either side converge, until the channel is narrowed to about 80 feet. The velocity of the current becomes intense. At the crest of the fall the whole volume of the river is projected outward, and separated at once into conical masses of foam. These soon lose their individuality and gradually blend together, forming a dense white mass, which, upon descending, spreads out at the bottom with unparalleled grace and beauty. A point of rock jutting out just in front of and slightly below the crest of the fall, affords a convenient spot for observation, whence the whole beauty of the scene can be taken in at a glance. At the foot of this fall the cañon of the Yellowstone finds its beginning in a beautiful wooded gorge, between two and three hundred feet in depth. The river flows swiftly, though smoothly over a rocky bottom to the crest of the lower fall half a mile below. It then emerges from between its rocky banks and makes its prodigious leap of 350 feet into the depths of the great cañon. It is no small undertaking to descend the steep and slippery side of the cañon, even to the crest of this fall, while the yellow, volcanic and nearly vertical walls of the gorge beneath bid defiance to the most expert climber. The depths below are filled with hot springs. The rock is soft and crumbling, affording no secure footing, while the river rushes away in a perfect torrent over innumerable cascades and ripples, causing eddies and whirlpools, which would dash to atoms any unlucky adventurer who should be so unfortunate as to find himself engulfed in its waters. About four hundred yards below the lower fall, a fine view is obtained from a high projecting promontory."

On his return Capt. Barlow found the descent of the Falls on the right bank much easier, though the view from the bottom of the second fall disappointed him. The party reached Fort Ellis Sept. 1. The region explored lies, with the exception of Gallatin River, mainly in the north-west corner of Wyoming, and is comprehended between the parallels of latitude 44° – 46° , and of longitude 110° – 111° . A bill has passed the Senate, and we hope may pass the House, to reserve the geyser region as a public park.

BRITISH AMERICA.—The Hudson's Bay Company's report for last year mentions the death by small-pox of some 3,000 Indians in the Saskatchewan district—a very serious depopulation. There has been a great dearth of martens.

SOUTH AMERICA.—Coal has been discovered at Neb-linto in Chili. A new city on the Chilian map is Augol, a fortified place on the river Pecoiquen, in lat. $37^{\circ} 42'$ S., long. $72^{\circ} 17'$ W., about three miles south of the head waters of the river Verzaro, and twenty-eight miles from Naciminto. It was founded Dec. 6, 1862. (*Nature*, Dec. 28, 1871.)

—Mr. T. K. Salmon, of Guildford, Eng., is about to make a collecting expedition to the highlands of the Columbian republic. (*Ibid.*)

EUROPE.—M. Jules Simon, the French Minister of Public Instruction, has appointed a formidable committee to inquire into the reforms and improvements necessary to be introduced in the teaching of geography and the maps and geographies intended for schools. This is a wise remedy for the national weakness, France being in effect the China of Western Europe, ignorant of other countries and impervious to foreign criticism, and, as the late war sadly showed, ignorant even of its own geography. The schoolmaster who is to whip the schoolmaster who conquered at Sadowa, must train himself in geography to begin with. (See p. 294 of the Paris *Polybiblion* for Dec., 1871.)

ASIA.—A British expedition is about surveying the boundary between Persia and Beloochistan. Commencing on the coast of Mekran, the party will pass northward to Seistan and Herat. The former is a very interesting region, of which the geology and zoology are quite unknown. Special typographical features of interest are the Lake of Seistan and the River Helmund which it absorbs.

—Muscat is now to be divided on the map into two states—Muscat and Sohar.

AFRICA.—The "Livingstone Search and Relief Expedition," promoted by the Royal Geographical Society, was to leave England the first week in February, headed by Lieut. Llewellyn Dawson, British Navy. On Dec. 22, the N.Y. *Herald* published a letter five columns long from a correspondent whom it had directed to head an expedition for the same purpose. This person wrote, July 4, from "Kwihara, District of Unyanyembe," a point about two-thirds of the way in a direct line between the Zanzibar coast and Lake Tanganyika. The substance of his diffuse and grandiloquent report is, that, arriving on the coast on the 6th of January, 1871, he was occupied two months at Bagomoyo in organizing his expedition, and on April 1, after having despatched successively five "caravans," as he calls them, himself pro-

ceeded with the sixth into the interior, and, by forced marches in the rainy season, reached the station from which he wrote. His news in regard to Livingstone is almost worthless. One report made him wounded in the thigh while buffalo-hunting. Another made him dead; a third left him deserted by all his men. All seemed to agree on Livingstone's having left Ujiji, on Lake Tanganyika, for some point west of the lake. In another month the correspondent hoped to reach Ujiji and meet Livingstone if he had returned there. This place was mentioned by Livingstone as one he was seeking to reach as long ago as July, 1868, and it does not seem probable he could have been detained three years in the neighborhood of it. Another bombastic dispatch in the *Herald* of Jan. 19, tells of a *Herald* expedition in quest of Sir Samuel Baker! It had reached Korosko on the Nile.

—It is a matter of sincere rejoicing that British sovereignty has again been extended to the Vaal River. The diamond fields included in the reannexed territory will, together with the gold fields of the Trans-Vaal, inevitably have the effect of breeding a new race of African explorers, and of opening up the southern part of the great continent to settlement and civilization. Already it is reported that the diamond capital at the Cape, "Adamanta," has a permanent and floating population of 20,000. The diamonds found near the river are said to be finer than those obtainable inland. They occur in a gravelly stratum, lying immediately under a hard and lime-like stratum, three or four feet in thickness.

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NEW LEGISLATION FOR SCHOOLS.

BY the GEORGIA SCHOOL LAW as amended Jan. 19th, 1872, the Governor, Attorney General, the Secretary of State, the Comptroller General and the State School Commissioner constitute the Georgia State Board of Education. Of this board the State School Commissioner, appointed by the Governor, is the chief executive officer, whose duty is to superintend the business relating to the common schools of the State; to visit the Senatorial Districts and examine into the administration of the school-law; to apportion the revenue to be raised to the different school districts of the State—each county being one district—and to make an annual report to the General Assembly.

The law provides for the selection of five freeholders in each county, who, holding office for the term of four years, constitute the County Board of Education. It is the duty of County Boards to lay out and describe sub-districts throughout their respective counties; to establish in each sub-district a school of such grade as may be required; to make all necessary arrangements for the instruction of the white and colored youth in separate schools, providing the

same facilities for each, as regards school-houses and fixtures, attainments and abilities of teachers and length of term time—"but the children of the white and colored races shall not be taught together in any school of this State."

The County Boards are invested with the title, care and custody of all school-houses, sites, school-libraries, apparatus and other property belonging to the district, with full power to control the same. They have the power to prescribe what text-books and books of reference shall be used: *Provided*, That the Bible shall not be excluded from the public schools of the State, and no book of a sectarian or sectional character shall be introduced.

The Secretaries of the County Boards are *ex officio* the County Commissioners of Education, and consequently, the medium of communication between the State School Commissioner and subordinate school officers. They must visit the schools of their respective districts at least twice in each year, securing, as far as possible, uniformity in their organization and management, and their conformity to the law, regulations and instructions of the State Commissioner. "They shall provide the most approved school furniture, apparatus and school agencies, and furnish teachers with regular forms, blanks, reports, etc."

Provision is made for the establishment of evening schools at the discretion of County Boards; also for the organization of one or more manual labor schools on a self-sustaining principle.

Applicants who pass a satisfactory examination before the County Board receive a license to teach from the County Commissioner, who has the power to revoke such license.

TACT.—Love swings on little hinges. It keeps an active little servant to do a good deal of its fine work. The name of the little servant is Tact. Tact is nimble-footed and quick-fingered; tact sees without looking; tact has always a good deal of small change on hand; tact carries no heavy weapons, but can do wonders with a sling and stone; tact never runs his head against a stone wall; tact carries a bunch of curious-fashioned keys, which turns all sorts of locks

EDUCATIONAL INTELLIGENCE.

MAINE.—In the eighteenth annual report of the Common Schools, the Superintendent, Mr. W. Johnson, says: The public schools of the State have generally been successful during the year. The average attendance of pupils has been about the same as last year; the quality of instruction has been evidently superior to that of former years, a fact attributable to the influence of higher wages, Teachers' Institutes, and Normal Schools. County supervision in most of the counties has demonstrated anew its value as an educational agency, and vindicated its rank as the "right hand" of influence in the school-room, and in stimulating and directing the efforts of interested educators to proper channels of activity. The following is the summary of statistics: Population of State, 626,915; number of districts and parts of districts, 4,353; number of districts with graded schools, 420; number of school-houses, 3,917, of which 119 were built last year; whole number of children between 4 and 21, 225,508; number registered in summer schools, 120,295; average attendance, 93,066; number registered in winter schools, 134,065; average attendance, 107,717; average length of schools for the year, 19 weeks, 3 days; number of male teachers employed in summer, 119, in winter, 1,801; number of female teachers employed in summer, 3,790, in winter, 2,180; average wages of male teachers per month, excluding board, \$32.44; average wages of female teachers per week, excluding board, \$3.43; average cost of board per week, \$2.30; aggregate expended for educational purposes, \$1,043,988; estimated value of all school property, \$2,488,523.

PENNSYLVANIA.—The thirty-eighth annual report of the State Superintendent of Common Schools, contains the following statistics: Number of school districts, 2,023; number of schools, 15,700, of which 4,634 are graded; number of school directors, 13,320; number of teachers, 18,021; average salaries of teachers per month, male, \$41.04; female, \$32.86; average length of school term in months, 6.36; number of pupils 834,614; average number of pupils, 567,188;

cost of tuition for the year, \$3,926,529; total cost, including expenditures of all kinds, \$8,580,918; estimated value of school property, \$16,889,624; amount appropriated to the several State Normal Schools, \$189,965. The five Normal Schools that were in operation during the year, have had, since their organization as State schools, 14,137 pupils, of whom 2,507 attended last year. They have graduated 469 students, 127 the past year. The number of academies and seminaries is 161; number of private schools, 346; pupils attending private institutions, 19,394. A portion of the report that is worthy of considerable attention, is that in which several important questions now before the educational community in Pennsylvania, are discussed. Among them are—1. That concerning truant, vagrant and neglected children. 2. That concerning a more complete provision for higher education. 3. That concerning a closer union between common schools and colleges. The report is accompanied by a number of well-prepared tabular statements which show in detail the present condition of the schools and by the usual reports of county superintendents, principals of Normal Schools, etc. It also contains an interesting account of the nature and peculiarities of the system of common schools.

VIRGINIA.—We are glad to learn that the present Legislature of this State contains a much greater number of pronounced advocates of the public school system than the last. Nothing has yet occurred which indicates any change of policy on the part of the general government, in regard to the school system. The Superintendent announces his intention of requiring hereafter a stricter adherence to the details of the law. Hitherto great leniency has been shown towards all faults and failings. This was justifiable in the beginning of a system so extensive and detailed; but circumstances seem to show that this spirit of indulgence has been misunderstood. The most positive requirements of law have been neglected in some places, and very imperfectly carried out in others. Slight difficulties or complaints among the people, or want of energy on the part of certain officers, are made the apology for disregarding the law. The central authorities will not permit this to continue.

MOBILE, ALA.—An esteemed correspondent reports the people of this city thoroughly awake to the importance of having their children well educated. The free schools are crowded to overflowing, while the private schools are more flourishing than ever before. The colored people, very generally, avail themselves of the advantages of the free school system. Mobile is to be congratulated on her educational facilities.

TENNESSEE.—Professor Henderson Presnell, who edits the Educational Department of the *Herald and Tribune*, Jonesborough, indulges in the following plain speech concerning the "Educational Outlook" in this State:

When, in 1869, the school law was repealed, we then prophesied that it would be a long time before the State of Tennessee enjoyed the benefits of an efficient school system. The eventful years of '70 and '71 have passed away, and nothing scarcely has been done to build up common schools or increase the intelligence of the people. Free schools have been actually legislated out of the State. The school houses have been virtually closed and the children doomed to suffer all the ills that ignorance is heir to.

We are now standing in the threshold of the New Year, 1872. The educational outlook is dark and unpropitious. Nothing inviting appears to gladden the hearts of the children or encourage the friends of popular education. The desolate school house casts its long and doleful shadow over the prospect before us. The school book has been closed against the children, and the teacher ordered from the great State of Tennessee.

What does all this mean? There is a grand lesson in it, if we can only read it aright. No school law! No school system! No school books! What signs of promise have we for the future prosperity of the State?

Public opinion is, apparently, fast settling down against the establishment of free schools in the State. There is but little hope for young men in this country. Immigration, upon which we depend for population and capital, will be driven to other States. Young men of energy and enterprise will seek homes in the West, where education is free, and intelligence, the basis of all true prosperity, is encour-

aged by the State, and recognized by the people as the only sure foundation of republican institutions.

Our people will see, when it is too late, we fear, that the loss of a school system is the worst calamity that could have befallen the State. Young men may as well begin to cast about them for more congenial homes. This country is not the place any longer for those who wish to rise in the world. The inference we wish to draw from these things is, our young men must seek homes and fields of labor elsewhere.

CURRENT PUBLICATIONS.

THE POSITIVE DIAGNOSIS OF MODERN MEDICINE IN ITS APPLICATION TO THE EDUCATION OF CHILDREN.¹

IT is not our custom to review in these pages medical books, or indeed any professional treatises except those having a direct bearing upon education; and we only make an exception in the present case, because the work before us, though professedly a monograph on "medical thermometry," deals directly in some of its chapters with questions of vital importance to teachers, parents and children. The history of this little volume should be briefly stated in illustration of this. Dr. Edward Seguin, a philanthropist and philosopher, whose rare modesty prevents him from being as widely and favorably known as he should be, has dedicated his whole life to the proper care and training of the young. An accomplished physician, with influence, acquaintance and professional attainments sufficient to have placed him in the first rank of the physicians of the French capital, he voluntarily turned aside from his brilliant future to undertake for the first time in the world's history the training, on philosophical principles, of idiotic and imbecile children. His works on this subject, published at intervals since 1846, are the admiration of the ablest psychologists of Europe and America for their philosophical

¹ MEDICAL THERMOMETRY AND HUMAN TEMPERATURE By Dr. C. A. WUNDERLICH and EDWARD SEGUIN, M.D. New York: W. Wood & Co. 1872.

method and their masterly grasp of the great principles which underlie the development of the human intellect. But Dr. Seguin was no mere theorist. He had practised long and carefully what he taught; with what success, let the numerous Institutions for the care of Idiotic and Feeble-minded Children in the United States, Great Britain, France, Germany and Italy, all of which avow their obligations to him, directly or indirectly, testify. In the development of these principles he was led to discern their application to children of ordinary and of extraordinary mental endowments, and has thus worked out, step by step, a "system of physiological education" (not education in physiology, but education by physiological methods), which is destined to be his greatest gift to the world.

While engaged in the development of this system in the scant leisure afforded by his professional labors, he has found the "positive diagnosis," as it is termed by physicians, the best means of determining the physical condition of the child, as indicating with absolute certainty how much of intellectual labor he can bear without peril to health, physical development, and even life itself. The thermometer, and especially the medical thermometer invented by Dr. Seguin, which makes the temperature of perfect health its zero, is one of the most important, indeed *the* indispensable instrument of the positive diagnosis, and is recognized as such by the medical profession very generally, and its use is so simple as to be acquired by any person of intelligence in a few minutes, at least so far as to determine the healthy or unhealthy condition of child or adult. The monograph of Wunderlich, given here in English, is the result of more than a million observations on Human Temperature in different diseases, made by Professor Wunderlich, (acknowledged to be the ablest of the German physicians,) and his pupils, and the deductions which he has made from this vast array in respect to the variations of temperature in these diseases and their significance. So far the work is entirely professional and of inestimable value to every physician. But Dr. Seguin has added to it a treatise of equal value, and of far wider application, on human temperature and the means of recognition by every intelligent teacher and parent, of

any departures, whether trivial or serious, from the normal standard of health, and the possibility, being thus forewarned, of restoring the health of the child to the healthy standard.

Dr. Seguin's proposition, then, so far as education is concerned, is, to make the thermometer a ruling power in the management of children during the period of growth and education; in other words, to measure their capacity for labor, study, play, etc., and to apportion them according to the tests of vitality furnished by thermometry.

This proposition is founded upon two facts. 1st. In health the human temperature has a *NORME* or standard point, from which it deviates only by small oscillations, like the tides of life, healthy undulations.

2d. In all diseases there are departures from the normal temperature—*up*, marking fever, and *down*, signifying depression; these may be classed as unhealthy, sickly, or mortal fluctuations.

This double or rather triple test of fever, of health, and of depression, reads thus on the scale of the medical thermometer, which is centigrade :

SECTION OF DR. E. SEGUIN'S THERMOMETER.

7°	....No known recovery.
5° to 6°	....Generally death.
4° to 5°	....Almost always fatal.
3.5°	....High fever.
3°	....Considerable fever.
2.5°	....Moderate fever.
1.5°	....Slight fever.
0.	....NORMAL or Health Standard.
.5	....Sub-normal.
1°	....Depression.
2°	....Collapse.
3°	....Algid-collapse.
3.5°	....Total collapse.

Dr. Seguin contends that, if with his thermometer, whose

manœuvre may be so readily learned, a mother, a nurse, or even an intelligent child, can take and record hourly temperatures for the guidance of the absent physician—it would be no difficult task for the manager of a school to study, and foresee the effects of the curriculum upon the health of his pupils, by noting the degree of heat daily marked on the stem of this instrument; and the value and importance of this precaution once recognized, how criminal it would be to devote to death those who, trying to master an art or science, graduate in reality for the next world.

But it is best to let Dr. Seguin speak for himself.

During the years children go through their school education, they have to grow too; so willeth Nature. One of the effects of this transitory function of growth is to throw a great disturbance upon the ordinary functions; the more since, by a constant interstitial accretion of neoplasm and new cells, every part changes its actual, and all parts their relative positions in each organ as well as in the whole body. Some children die in this body-quake, and more come out of it bent or crippled, never to rise again in beauty and capacity. But what of those who, meanwhile, have to pass through the ordeal of stupendous studies or stupid immobilities?

They are superintended and taught by doctors in all the faculties, but they have not yet seen the one whose duty it is to be "keeper of the ledger of their vital resources."

Out of the multitude of symptoms which warn against the degeneration of organs and the exaggeration or decline of functions, in children under training, I will suggest: the daily elevation of general temperature during the latest hours of study; and the following irregularities in the distribution of local temperature—as per surface thermometer. Extremities cold and body too hot. General coldness, with either dry heat in the palm of the hands, or a cold and abundant moisture of the whole hand. The same general coldness with parched and peeling lips, and inordinate thirst; or localized heats signalized by a flush on one cheek, oftener on one ear, not always on the same; or an over or unequal temperature on the two temporal regions, marked by a deeper blueness of their venous arborescence. The hand-thermometer and the sight admonish of these dangerous anomalies; the fever and surface thermometer measure them, and also the pyrogenetic action of the elements which enter into the school life.

The body development of the youth is accomplished by oscillations, zoological seasons, corresponding, if not in times, in operations at least, with those which regulate the development of vegetables. In one of the springs of these physiological years of children, some of them will undergo remarkable changes, of which note the following:

Some feel all the uneasiness attending growth, and yet they do not grow; but symptoms which cannot be synthetized under the name of a particular sickness lurk about their frame—mark their anorexy and dirt-gray skin. If this state is not closely watched by thermometer, and treated by revolutionary changes of climate, training, food, etc., a secondary fever supervenes, which carries off the child; or receding, leaves bare to view a constitutional affection: this process of "degeneration of the system," affects particularly the nervous, lymphatic, and osseous.

In another case the child looks above his fellows in amplitude, freshness, and rich curves; he is amiable though irritable, kind, and studious; but has oftener become tired than can be accounted for. The danger is of a "degenerescence of apparatus"—of the locomotion, for instance. Whoever has followed with wonder the hasty spring growth of the elder-sprouts, and seen one of them suddenly dry up pithless amidst its sappy fellows, can form an idea of this "degenerescence of special organs," by localized deficiency of nutrition.

This form of "localized arrest of nutrition," is always unilateral, a character which permits us to detect it early, by the comparative use, on both sides, of the instruments of positive diagnosis: of the surface thermometer, which will detect a coolness of half a degree and upward on the suspected side, long before any other sign of the affection can be otherwise descried; of accurate measurements which will spy the difference of size of the limbs; of electricity and æsthesiometry, delicate tests of tactile sensibility; of the dynamometer which gives mathematical evidences of difference of contractility located in the hands and arms; and of the dynamometric swing, excellent test of that of the lower limbs.

The gravest affections of the nervous system, central and peripheric, visit the young student in proportion, it seems, to the severity of his training; and are almost unknown among the young vagabonds and street boys. I intentionally choose these two extremes to show what nutrition is, and what non-nutrition can produce. The college children are better fed than the abandoned children; yet they receive less nutrition from their food because they spend in mental and other exercises more of the *pabulum vitæ* than their food—supposing it the best—could afford. To show that this bankruptcy of nutrition, by inordinate expenditure of the pabulum, is the cause to which we must refer the majority of the nervous affections I have in view, and their reactions on the rest of the economy, I will take, for illustration, one too frequent and too fatal among young scholars—meningitis.

It is in its various forms as complex as the etiology of these forms. However, from the baby who ceases to be nourished, though he is fed, the moment his nurse becomes pregnant, from the child overpowered by heat, and the student by his studies; that the subject be not nourished enough, or spend too much of their nutrition in mental or other exercises—the multiform affection—under the symptomatic name of "cerebral fever" (Trousseau)—may be referred to an insufficiency of the vital properties of the blood, and its causes synthesized in "deficiency of nutrition"—of whatever origin, of course.

HUSBANDING THE VITAL FORCES.

For there are more ways than one to "starvation." When we spend more than we can assimilate of forces expressed by caloricity, as in the previous example of the school and vagrant boys; when the blood is not well oxygenated, nor rich in red corpuscles; whenever it does not penetrate all the tissues by circulation and endosmosis; whenever its serum lags behind in its primary form, or in that of lymph, pus, effused fluids, whether surrounding or not miliary and tuberculous deposits, there is "deficiency of nutrition."

And as there is a general and a local circulation, there are local as well as general starvations, caused by the devitalized elements of the blood remaining behind in certain localities. If it is cruor, it produces gangrene, dry-rot, etc.; if it is serum, it produces dropsies, tubercular affections, etc. A continuous congestive state (orgasm) disposes to a separation of the components of the blood, and to their

transformation into secondary products, as much as a prolonged scantiness (anæmia); hence the unrelenting attention exacted from young students makes their meninges the particular seat of vascular congestion, which cannot fail, sooner or later, to end in thickenings and protean formations, which devote the school-laureate to vulgar incapacity, imbecility, or death.

The teacher must know that all the operations exacted from a child—actions, perceptions, emotions, imaginations, thoughts, and volitions—are the direct, reflex, or converted products of sensory and cephalic movements, manifestations of a "force."

This "neurine" force is "fed and spent, never lost," but "converted" into labor or "wasted" in shocks and frictions. In regard to this neurine force, those who assume the charge of the youth "will" have twofold duties: one, to direct its usage through the muscles, senses, and mind, so that they could produce the most valuable labor with the least friction or shock; the other, to keep a constant equilibrium between the forces incoming and those going out. But this duty includes a third, more important than both: it consists in husbanding the nervous and correlating forces, so that the children will have enough, not only to spend in labor, in growth, and in necessary repairs of their organism, but always enough in store to spare for an emergency, like extra-work, exposure, disease, surgical accidents, etc. This investment, managed by the true manager of a school, is the real insurance of life and of future capacity; without it, the existence or welfare of children are never secure.

Therefore, not content with having ascertained their condition at the beginning of each course, he must continue to record their vital signs and the working of their functions periodically for all of them, and more frequently for those whose condition is suspicious. The general thermometer will detect fluctuations (more than diurnal oscillations) in a child too much confined; the local thermometer will descry a line of fever-heat at the base of the forehead in another who over-taxes his memory; the sphygmograph will trace the jerked pulse of one who has been running or boating to excess, or an intermittent one for more secret reasons; the spirometer will show a loss of inspiration which corresponds with a loss of circumference, or with a lateral depression in the chest, as per tape-measure and lead circle; and the dynamometer will mark a weaker contractility otherwise suspected by the circular measurement of the arm and from the loss of body weight, etc., in the young one's crouching for hours over books.

This positive knowledge of the organic and functional condition of each child once acquired and steadily kept up, like a commercial account, let the programme of instruction, or even the plan of general training be what they may—dictated for some years yet by pride and love of the useless—the man in charge of children must, in any circumstance, manage them upon this physiological basis:

Every animal is a producer of heat, and correspondingly a consumer, too.

He must produce enough of it to live, to grow, to repair its constituent elements, and to move towards its ends, whether man, child, bird, or buffalo. (*See Comparative Table of Temperatures in the Volume under review.*)

The degree of normal production of temperature is the measure of the physiological capacity for action, *alias* latent force.

The first duty of the teacher is to see that there is no useless consumption of this latent force by friction, shocks, etc., as may be ascertained by thermometry.

The second is to supply this force by sufficient food, exercise, aëration, and insolation.

The third is to consume this power in preparing the child for the most useful and congenial modes of activity.

At work—at school or in the fields—the child consumes the organic materials of his blood.

This "ustion" is the *sine qua non* condition of labor.

The thermometers are the "meters" of this local or general ustion, and therefore the index of the capacity of each child for labor.

I most respectfully call the attention of the otherwise so learned and capable superintendents of schools and seminaries towards these principles, the bases of the physiological conditions in which the children must be kept during the entire time, and at the different periods of their tuition and growth.

This must be the object of the earliest reform. The man who understands best the pyrogenic conditions during labor must be the teacher, not only of the pupils, but of the teachers; and will cause to be written in each school-room—but in words invisible for the young: THE CURRICULUM IS MADE FOR THE CHILDREN, NOT THE CHILDREN FOR THE CURRICULUM.

Finally, Dr. Seguin urges again the application to practical education of the tests offered by thermometry and by other means of positive diagnosis, to keep constantly the balance of vitality in favor of the students, thereby improving their beauty and capacity, and soon the æsthetic, social, and working qualities of the race.

Then, reminding his medical brethren that the best as well as the first of teachers is the mother, Dr. Seguin enters into minute and careful details for her instruction in the art of thermometrical observation, and advising his brother physicians to instruct her in it, he concludes:—

"Make her love, study, and trust the little magician, which, like the little finger in the fairy tale, tells things that nobody can know otherwise. With it she will give us a trusty account of the condition of her patients. During our absence, her hand will be our hand, her eye our eye; and more, seeing a sudden rise or fall of temperature when we are away, she foresees the peril that thermometry predicts several hours in advance, as the barometer does the storm; her mind becomes our mind, she hastens our return, giving us a chance to ward off a deadly exacerbation or collapse; truly herself saving the life of the patient and eventually our own reputation.

Therefore let us educate women in the arts secondary to ours, and particularly in the handling, recording, and intelligently reading of the operations of the medical thermometers. And when the hours of family trials and of heavy professional responsibilities come, when zymotic or contagious diseases invade the home circle, we have by our side the faithful woman. Neighbors, quacks, and mediums proffer in vain their nostrums; she stands by her thermometer, knowing that a calm and correct record of a day's fever brings more hopes and is a better foundation for a cure than a dishevelled therapeusis.

Less solemn, but not less useful, is the prophylactic home-use of the medical thermometers. I can only give one instance of it: when parents are preparing for an absence, the husband looks at his weather-thermometer to provide extra coverings against the rigors of external temperature, and the mother looks to her medical thermometer, to make sure that she does not leave behind her, ignored, a

bodily temperature foreboding sickness to one of the children, in the next twenty or forty hours.

We think our readers will agree with us that there is a deep importance and significance in these suggestions, and we cannot but hope that all teachers will heed them, and thereby save a multitude of youths from the great evils which threaten them.

THE PARSE^R'S MANUAL,² embraces classified examples in nearly every variety of English construction, and will serve as an excellent companion volume to any of the English grammars. It is impracticable to introduce into the school grammars the drill exercises necessary to make learners familiar with the parsing and analysis of all kinds of sentences—hence Mr. John Williams prepared this volume, and hence we commend it.

PINNEO'S GUIDE TO COMPOSITION,³ is a series of practical lessons designed to simplify the Art of Writing Composition. The author's plan is to gently lead the pupil along step by step, until he is actually taught to write composition before he is aware of it, and even before the usually repulsive word "Composition" is used. With the skillful use of this little book there is no reason why the youngest learner may not be taught to express his thoughts readily, in a "correct, clear, forcible and easy style."

MESSRS. SHELDON & CO., have become the publishers of "Colton's Series of Geographies." The "Series" is sensible; for it has but *two* books, and these two will give the children more geography than some of the more pretentious series of four, five or six books. The maps are new and good.

MESSRS. CHARLES SCRIBNER & CO., have recently published "Wilfrid Cumbermede, an Autobiographical Story," by GEORGE MACDONALD. 498 pages, and fourteen full-page illustrations. The press is very highly commending it. To their "Illustrated Library of Wonders" they add "The Wonders of Vegetation," from the French of Fulgence Marion. Edited by SCHEER DE VERE. The volume has 61 illustrations.

MESSRS. DODD & MEAD are active, having added to their already quite extensive list, "The Sciences of Nature *versus* The Science of Man," by NOAH PORTER. "A Comparative History of Religions," by JAMES C. MOFFAT. "The Theology of the New Testament," by J. J. VAN OSTERZEE, from the Dutch, by Maurice J. Evans; and another of the August Stories, entitled "Hunter and Tom," by JACOB ABBOTT.

MESSRS. HARPER & BROTHERS' recent standard publications are unusually numerous and excellent. Among them we find "Physiology of the Soul and Instinct, as distinguished from Materialism," with supplementary demonstrations of the Divine communication of the narratives of creation and the flood, by MARTYN PAINE. This scholarly work contains 707 pages, with a good portrait of Dr. Paine, the author.—"The Life and Times of the Rev. John Wesley, M. A., founder of the Methodists," by L. TYERMAN. Vol. I., 564 pages, with portrait from an engraving published in 1743. The work is to be completed in three volumes.—"Character," by SAMUEL SMILES, 387 pages. "Shakespeare's History of King Henry the Eighth," edited, with notes, by WILLIAM J. ROLFE. 210 pages, with illustrations.—JACOB ABBOTT adds to the series of "Science for the Young" a new volume entitled "Water and Land." It has 330 pages, with numerous illustrations.—"Gentle Measures in the Management and Training of the Young," exhibiting the principles on which a firm parental authority may be established and maintained, without violence or anger, and the right development of the moral and mental capacities be promoted by methods in harmony with the structure of the characteristics of the juvenile mind, by JACOB ABBOTT. 330 pages, with illustrations.—"Woman's Worth and Worthlessness," being the compliment to "A New Atmosphere," by GAIL HAMILTON. 292 pages.—"The Land of Desolation," being a personal narrative of observation and adventure in Greenland, by ISAAC I. HAYES. 358 pages, illustrated.—"Round the World," including a residence in Victoria, and a journey across North America, by A BOY. Edited by Samuel Smiles. 290 pages, with illustrations.—"Reading Without Tears," or a pleasant mode of learning to read, by Author of PEEP OF DAY.—"Border Reminiscences," by RANDOLPH B. MARCY. 396 pages, with illustrations.

MISCELLANEA.

E J. RICE, who left the Eastern field about three years ago, in search of health, has found good health in Colorado, and has founded an Academy at Trinidad, C. T.

J. C. SMITH, Principal of the Iron City College, Pittsburgh, Pa., is doing a notably good work in the "Commercial College" line.

THE newly elected State Superintendent of Public Instruction for Iowa, Mr. Alonzo Abernethy, has just entered upon the duties of his office and appointed Mr. J. W. Stewart, of Fayette, as his deputy. The retiring officer, Hon. A. S. Kissell, goes immediately to Europe on a tour of inspection among the schools of the Continent, especially in reference to the Kinder Garten system of instruction.

CONSTANTIN STAUDIDAS, of Anchialos, Greece, has published "A History of the Franco-German War," in modern Greek. The book is written in an extremely plain and clear style, and may be understood by any one who can read the Greek classics. It is especially interesting to read these modern events in a semi-classical garment. Even the Greek orthography of modern names is quite refreshing. *Cremlux* is changed into *Kreme*; *Chassepot* into *Sassepo*, etc. The French newspapers *Debats*, *Temps*, *Siecle*, are respectively called *Syzeteseis*, *Chronos*, *Aion*. The narrative forcibly reminds us of Xenophon and Arrian—so much is still left in modern Greek of the old classical form of expressing thoughts. The book is published in Leipzig, Germany. Modern Greece (alas!) has but very few printing establishments, and the countrymen of Thucydides and Plato must look for the cities of "barbarians" to enable them to read their own modest productions!

PUBLISHERS' DEPARTMENT.

We have received the **Catalogue** of the Mass. Institute of Technology, for 1871-72, containing lists of 34 teachers and 264 students; also programmes of the courses, with a full account of the methods of instruction, and of the Chemical, Physical, and Mining Laboratories, together with plans of the several floors of the Institute Building. We advise all interested to examine this Catalogue.

The Manufacturer and Builder always contains practical information regarding the newest and most useful discoveries and inventions in science and art. Among the articles in the present issue we notice those on "Ready-Made Houses," "International Societies," "New Rotary Drilling-Machine," "The Selden Double-Action Plunger Pump," "Floral Fountains," "Manufacture of Russia Iron," "New Sources of Supply for Paper," "Fallacious Theories of Boiler Explosions," besides many others, all admirably illustrated. Published by the Engineers' and Manufacturers' Publishing Company, 37 Park Row, New York. \$2 a year.

The National Sunday School Teacher for 1872 is "BETTER THAN EVER!" as you will find by sending fifteen cents for a Specimen copy to Adams, Blackmer & Lyon, Pub. Co., Chicago.

The Polytechnic Collection of Sacred and Secular Music for Schools, Classes and Clubs. Prepared by U. C. Burnap and W. J. Wetmore, is now in press and will be ready for the trade on the first day of May. This book is prepared at the request of eminent teachers, and is intended to supply a want long experienced in our Normal, Academic and High Schools, by furnishing a collection of standard music, including the established favorites of the school-room, hitherto found only by searching through many volumes, and the well-known germs from recent operas, together with the best "College songs" and patriotic airs. To render this material available, it has been necessary to write new words to the most of the music, and great care has been taken to supply poetry vigorous and healthful in tone, and adapted, in the secular, as well as in the sacred music, to the different occasions of school life. The reputation of the editors is a sufficient guarantee of the excellence of both music and letter-press. This novel collection of approved devotional and secular music, suited to all the occasions of the school, and designed for permanent use, forms a handsome octavo of 208 pages, and will be sold for \$1.00 per volume. Specimen copies for examination sent to teachers by mail on receipt of the price (\$1.00). Address J. W. SCHERMERHORN & CO., Publishers, 14 Bond St., N. Y.

ANNOUNCEMENT.

Messrs. WILSON, HINKLE & CO., have just published :

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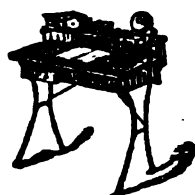
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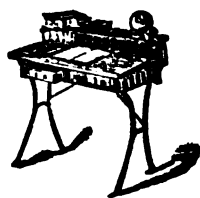
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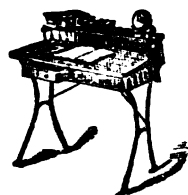
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## *EDUCATION IN JAPAN.*

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In order to get even a faint idea of Japanese culture and education, we must glance backward through many centuries. Japan received from China her alphabets, her literature, her science, and indeed almost her entire literary property and her civilization. One of the most interesting and sometimes the most difficult studies to a resident in Japan, is to distinguish between the pure Japanese and the Chinese expressions and customs. Certain Japanese purists, who desire to disclaim as much as possible their indebtedness to China, assert that Japan anciently possessed a language and literature of her own. An alphabet called the *Kami* or god-letters, they assert, was formerly used by the ancient sages, which was given and taught them by the gods. It is also asserted that many of the ancient burial-stones in the temple-yards, in the sacred city of Maico, contain inscriptions in

this character. This alphabet has two forms, one consisting entirely of straight lines and small circles, the other of curved lines, and evidently used as the script or running hand. The writer has seen this alphabet printed in a Japanese book, which is written to disprove the popular idea concerning the "god-letters," and to show that they were brought from Corea at a comparatively late date, several centuries after the Christian era, and that the story of their having any sacred character is a fabrication. We have looked carefully in many ancient temples and in many old burial-grounds and other places in Japan, but have never seen any inscriptions in this character, though Sanscrit inscriptions are found in nearly every cemetery.

"The first knowledge of Chinese writing was carried to Japan by a prince of Corea in the year 284 of our era, and then, immediately after, the tutor to that prince, a Chinese named Wang Zin, having been invited, the Japanese courtiers applied themselves to the study of the Chinese language and literature." In the sixth century, the missionaries of Shaka, having overrun nearly all Eastern Asia, even to Corea, crossed over to Japan, and spread the doctrines of Buddhism. "Then every Japanese in polished society, besides being instructed in his mother tongue, received instruction in Chinese also; consequently read Chinese books of morality, and aimed at being able to read and write a letter in Chinese."

"The original pronunciation of the Chinese degenerated early, and new dialects of it sprang up which were no longer intelligible to the Chinese of the continent; but notwithstanding that, the Japanese remained able, by means of the Chinese writing, to interchange ideas not only with the Chinese, but with all the peoples of Asia that write Chinese. The Chinese written language has become the language of science in Japan. It will long remain such, notwithstanding the influence which the civilization of the West will more and more exert there."<sup>1</sup>

It will thus be seen that the Chinese language and thought became imbedded in and greatly assimilated to the

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1 Introduction to Hoffman's Japanese Grammar.

Japanese. For centuries it has been the sum of knowledge and culture to the educated classes. True it is, that the Dutch language was studied to a considerable extent, but it was "the monopoly of the fraternity of interpreters and a few literary men, who used this knowledge as a bridge, over which the skill of the West was imported and spread over the country by means of Chinese or Japanese translations."<sup>2</sup> The Dutch language was even for a time the court language of the country; and many Dutch words have become vernacular. From time to time the student is amused and surprised to find words which he may have casually heard along the Raritan or the Hudson, or read on the sign-boards of Amsterdam turning up in Japanese speech; while the names of chemicals, merchandize, etc., of Dutch origin, are too numerous to detail. We have before us the catalogues of the schools and studies of the province of Yetsizen or Echizen, the foreign studies of which the writer has the honor of directing. There are three grades of school, corresponding to our primary, grammar and high school. The Japanese boy is supposed to begin schooling at five or six years of age. He first learns the *kata* and *hira kana*, Japanese alphabets, which are respectively the text and running hand. Each consists of forty-seven syllables, and though spoken of by the Japanese as, "our kana," are altered or abbreviated from the Chinese. The Japanese alphabet, like the Chinese characters, is a syllaban. The hope of Japan spends five years in the *Sho Gaku*. During the first year he learns to read in their order, "Small Learning"—the moral duties of man; Confucius' Four Books of Morals; the Three-Character Book of Morals; the Book of Filial Duties; the Book of Great Lineage—ancestry of the Mikado; and the Entrance to Knowledge—duties of cleanliness, obedience, etc. By way of commentary, we may add, that the astonishingly polite urchins of Japan, returning home from school with their ink-bedaubed faces and bowing very low, as they invariably do, to their foreign teacher, obey the precepts of obedience rather better than those of the virtue usually supposed to be next to godliness.

All these books are written in very easy Chinese characters. After being examined, the scholar begins his second year, the studies of which are : rudimentary Geography, a primer written in euphony ; the writing of small Chinese characters ; learning the names of all the Emperors of Japan, the names of the large cities, provinces and their local divisions, how to read the proclamations of the Imperial Government, the names of and written characters for familiar objects ; learning to write the characters of numerals, points of the compass, the seasons, names of countries, chronology, names of years, etc. It will be noticed that in the first year reading only is pursued ; in the second, the books and writing are to be studied. To go into a Japanese school-room, while the boys are learning their lessons, (study at home is a new idea in Japan) reminds one of the Congress at Washington or an hour on 'Change.

Our Jap, during the third year, learns the four fundamental rules of arithmetic and the use of the abacus ; and here the mathematical education of most Japanese ends. He also reads the Book of Heroes—a reader containing accounts of model men and women, virtuous and noble actions, etc. The third, fourth and fifth years are repetitions in kind of the first and second. Much time is devoted to the study of etiquette, how to walk, bow, visit, talk, etc. In this department we must confess the native of Japan a peer to that of any other country. A peculiar fact which the American teacher in Japan notices, is this, that the keeping of discipline, which in America requires so much time, nerve-power and will, is entirely unnecessary in Japan, the boys being orderly and quiet to a remarkable degree.

The next school into which the pupil is now graduated, is the Middle School. It would be tedious to detail all the studies, but in substance, they are simply an advance in the same line of the studies of the small school. The scholars read the History of China, the Book of Rhetoric, or Composition in Chinese ; a brief History of Japan, and a large "Book of Japanese Strategy," containing remarkable feats in war, narratives of heroes, etc. In writing, they learn the Chinese small text, and how to write private and official letters, both original and after models. In arithmetic, they

again drill in the four fundamental rules and learn to solve problems, and to count large numerical quantities. They also read a brief universal geography, and study quite thoroughly the topography of Japan. The time occupied to complete the studies of the Middle school, is three years; during which time the pupil also receives initiatory lessons in fencing, wrestling and riding.

Young Japan is now in his sixteenth or eighteenth year, and enters the Dai Gako, or High School. Here he reads several histories of Japan; the first is from the Golden Age, and is to be brought down until "within the memory of men now living." The second is the history of ancient Japan, from the first Emperor, until the middle ages; and the third, written in very fine style, takes up the history of Japan at the middle ages, and continues it until the time of Iyeyas, in the early part of the 17th century. In arithmetic, vulgar and decimal fractions, the rule of three, involution, evolution, and progression are taught, together with a little algebra. Daily exercise in fencing and wrestling, and a monthly lesson on horesback, hitherto "completed" the education of the average educated Japanese. While many, by private study afterwards, far exceeded their school studies, the majority, especially in mathematics, never reached the maximum presented above.

Thus it will be seen that the entire education, as we out of compliment call it, of the Japanese boy was simply the knowledge of how to read and write Chinese, a few scraps of knowledge concerning other countries, the history of Japan and China only, a little of the simplest mathematics, and a pretty heavy dose of atheistic morals,—no education in its radical sense, only the training of the memory and the storing of the mind with a few facts and many precepts. We have every reason to believe that the state of education in Echizen, previous to the coming of a foreign instructor, was exactly the same as that in the best provinces of Japan. It must also be remembered that in many of the provinces, nay, in most of them, no government school existed, the few there were, being private; and further, none but the sons of the Samurai—the literary military class of Japan—were permitted to attend. Considering these facts, it is not sur-

prising that although nearly every inhabitant of the cities in Japan can calculate on the abacus, can read and write the hira kana and kata kana, and read the government proclamations, yet concerning the facts and methods of the classified sciences, the normal Japanese was like a child that had not yet picked a single pebble from the boundless shore.

WILLIAM E. GRIFFIS.

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*THE SONS OF PESTALOZZI.*

FROM THE GERMAN.

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■ CHAPTER XX.

WHEN Theodore Waldner, in consequence of his conversation with Mechthild de Fernau, had purchased the French novel "*Le Mutilé*," he had taken the first opportunity to ask his friend Bechtold about the meaning of the title. The latter had rendered the title "*Der Verstümmelte*," and at the same time had placed his own French dictionary at Theodore's disposition. Waldner was determined to overcome all the difficulties which his defective knowledge of the French language opposed to his progress. He soon found himself deeply interested in the tale. Pope Sixtus V. who, as a boy, had tended a herd of swine, and subsequently had become a priest, a bishop, a cardinal, and finally the bearer of the treble crown, proceeded with merciless severity against all evil doers. But hardly less was his cruelty against those who denounced his procedure as too severe, and attacked him by word of mouth or by the pen. One of these latter, a highly gifted poet, and the hero of the tale, was punished in the most fiendish manner, by cutting out his tongue, and chopping off his hands, thus depriving him of the organs to utter, and even to write down his ideas. His genius was still creating the most affecting poems, the most beautiful images; he still conceived them in the most expressive language; but they had no existence without him. The sky, the waves, were his parchment on which he



wrote ; but no eye except his own could read these characters !

"This is my own life," cried Theodore, "the eternal helplessness of my mutilated mind. But that organism that God has preserved for me, in his mercy, and which he has given me anew, I will use to the best of my ability ! There was a time when I was like that poet. I had no hands, and no tongue, for I did not know their true purpose. But now that I have wings with which to fly, must I not use them to soar high in the infinite space of thought ? O, give me power to learn, to learn— —"

Fritz Bechtold found Theodore absorbed in these meditations. What a comfort for him to lay his soul open before a being that fully understood him ! Bechtold was the son of a poor artisan. Brought up to the trade of a locksmith, he could not resist the charms of intellectual training, the taste for which he had imbibed in evening schools. By teaching others in the elements of knowledge at an early time of his life, he acquired the means to enlarge his own. It soon appeared that he had unusual talents for the art of teaching. His language was determined and brief, his bearing manly and compact. The lineaments of his features had a sharp and significant cut ; in his very eyes there was an expression that filled his scholars with awe, and they willingly yielded to him the whole of their mental capacities. His hair he always kept short and close. He himself, good-humoredly, compared its stiffness with the seal-skin of a traveling trunk. But his heart was soft and capable of a depth of feeling which would scarcely have been expected in one so hardy and rugged.

The tea-bell was calling the two friends down to the large hall in the basement of the house. When they were passing through the corridors, they met with Gertrude. The lights were burning too dim to notice the sudden flush of crimson that appeared on Bechtold's face. Thus it was always when he met with Gertrude. If in such cases Waldner was with him, Bechtold could not help observing the expression of infinite tenderness with which Gertrude's eyes rested on his friend. Then he felt as if, on a sudden, the blood were curdling in the chambers of his heart. But his attachment

to Waldner was never affected by it. In this heart envy and jealousy could never dwell.

Gertrude, who did not take her meals with the boarders, seemed to have some business in the third story, in which the sick-rooms and the "Carcer" were situated. She noticed the janitor taking supper up to Count Linsingen, "the prisoner." In one of the sick-rooms she found Mrs. Bröge duly watching at the bedside of little Horace Gordon. Gertrude comforted the patient with soothing words, and then walked up to the door of the "Carcer." She tried the lock, and found it all right. Having finished her round of inspection, she walked down to the second story, and was just passing a bend in the lower flight of stairs, when she suddenly found herself opposite to Dr. Staudner, who on his part was ascending the stairs to pay another visit in the sick-room.

"What in the world has brought your displeasure upon me, Miss Gertrude?"

These words, with which he addressed Gertrude in a tone of gallantry, were accompanied with a sinister leer of his eyes, which looked sparkling over his blue glasses. He had planted himself, with cynical indifference, squarely in Gertrude's way, who in her anguish did not even attempt an answer to his question, but tried to pass the hated man by turning towards the railing. But with impudent familiarity he barred her passage, and continued:

"Please, Miss Gertrude, let us make a truce, or rather establish peace, and a peace for ever, if possible. You know, I love you! You have made a convert of me. I am determined to take a wife, and none but you—"

Gertrude, when she was baffled in her efforts to reach the lower story, saw that nothing was left to her but a retreat. She swiftly slipped back to the second story, where she entered the first room she found open. Closing the door behind her, she secured it by a bolt, so as to make it impossible for her pursuer to follow her. Not till she heard Staudner's steps on the third story, could she collect herself sufficiently to examine the room which had given protection to her. She found that she was in Dr. Wehrmann's room, and her heart throbbed violently when she bethought her-

self of the possibility that somebody might notice her passing out of this room. Suddenly she heard a peculiar noise at the window-panes, very much as if a bird was flying against the glass. It was dark in the room, but a lantern in the yard afforded light enough to see that some white object was dangling outside the window. Remembering that the "Carcer" was just over Wehrmann's room, she had not the slightest doubt that a contraband letter had been let down from the railed window of the "Carcer," to go either into this room, or into the yard. Noiselessly she opened the window, and saw that the cord to which the letter was fastened, was repeatedly pulled from above, evidently because the window cornices had interfered with the descent of the paper. When, at length, the paper had reached the level ground of the yard, she wondered who would take care of the letter. But directly the thought struck her that she ought to prevent this. Pulling up the cord, she boldly seized the letter, detached it, and, after closing the window, left the room without delay.

She reached her own room in the basement without being noticed. Here she read the direction of the letter, which was addressed to "Miss Thekla Federer," the riding-master's daughter. Slipping the letter into her pocket, she concluded to watch the further development of the drama. For this purpose she immediately repaired to an unoccupied room of the house, from the window of which she could conveniently see what was going on in the yard without being noticed herself. She saw that the cord was still hanging down from the "Carcer," from which Linsingen could not see anything going on in the yard, since the window was secured with those wooden screens, which prevented all communication with the outside without excluding light and air. After a little while, a little girl, one of Bröge's daughters, stealthily approached the cord, and seemed not a little surprised that nothing was attached to it. At the same time Gertrude heard the steps of the boarders, returning from their meal. This induced her to repair to her uncle's room. Mrs. Nesselborn had sent word that she would be at the theatre that evening. Gertrude considered this a very lucky accident, since her uncle, at least till 10 o'clock,

would be free from all interference on the part of his wife. She concluded that an appeal to her uncle's pedagogic conscience would rouse him from his lethargy. In this she was not disappointed. Nesselborn, after hearing her report of all that had happened, including Staudner's coarse importunities, impatiently seized and opened the captured letter. It contained an appointment of Count Linsingen with the riding-master's daughter at half-past ten o'clock, when he would find means to slip from the carcer.

Nesselborn was thunderstruck. Gertrude proposed that the premeditated attempt should be allowed to go on, in order to entrap and bring to punishment all persons concerned in it. She did not doubt that Bröge would open the carcer at the appointed hour, and thought it best to require Waldner's and Bechtold's assistance. Both would have to watch Bröge's movements, and by a preconcerted sign might notify her uncle when Linsingen would leave the carcer. Bröge, with his whole family, ought then to receive immediate notice to leave.

Mr. Nesselborn approved of the plan, and directly proceeded to Waldner's room in which he found both friends reading the "French novel." He could not help intimating his displeasure at that kind of reading, but did not dwell long on the subject. He made Waldner and Bechtold acquainted with all that had happened in the evening, and both cheerfully promised to assist him in exposing the evil-doers.

Everything came to pass "like a well-calculated eclipse," as Göthe's *Alba* says. Mrs. Nesselborn had returned at 10 o'clock, and retired to her room. She was just going to rest, when, on a sudden, at half-past 10 o'clock she was startled by a loud and confused noise. She could distinctly recognize the voices of Bröge, of his wife, of her own husband, and of Bechtold and Waldner. Since she was partly undressed, it took some time before she could appear at the scene of action, and when she arrived at length, she found only "accomplished facts." Already the dismissal of the whole Bröge family had been decreed and formally pronounced. Linsingen was again secured behind bolts and bars, and had been sentenced to "prolonged captivity."

The riding-master was to be notified next morning that his services were no longer required. Mrs. Nesselborn did not think it advisable to interfere for the present, but suspended her own action in the matter till the next morning. Waldner and Bechtold repaired to the sick-room, where they had volunteered to watch at little Gordon's bedside, and the usual quiet was once more restored to the school.

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### THE USE AND ABUSE OF THE ADJECTIVE.

“AN adjective is known by its making sense with the word *thing*,” was an oft and forcible pedagogical precept during our youthful struggles to acquire the mysteries of the English language as expounded by Lindley Murray; and this simple formula, with the emphatic addition of a smart cuff on the ear, enabled us then to recover some of our *faux pas* in tripping through a sentence. This judicious formula, so convenient then, would be no less so at all periods. “To make *sense* with the word *thing*,” if borne in mind, would be an effectual safeguard against the perverted and incongruous use of adjectives, which are so frequently found to have little or no *sense* with the object they describe.

Thus I propose to enter the lists as the unworthy champion of the fairest damsels in the English language. I speak of them in the gentler gender, because the one end and aim of their existence is matrimonial. They exist not *per se*; for, until they are married to some sturdy noun, they are nonentities. I shall devote myself to the benevolent task of rescuing these peerless ladies from the hands of ogres who torture, harridans who overwork, and cruel guardians who incongruously wed them—marrying the young to the old and ugly, the stately and proud to the mean and despicable. In cases where I find some fair vestal wedded to a greasy churl—as in the instances of a “beautiful” round of beef, or a “splendid” mutton-chop—I shall decree a divorce *a mensâ et thoro*. I shall order, if not a judicial, at least a judicious separation between “frightful” murders, which inspire not

fright but horror; "terrible" catastrophies, which inspire not terror but awe, and "fearful" cases of destitution, which inspire not fear but indignation and pity. I shall put an end, moreover, to all unions in which sisters are wedded to the same noun. Polygamous marriages are permissible, for language came from the East, bringing Eastern customs with it. But polygamous marriages are not permissible where there is blood-relationship between the wives. Yet we read of thefts which are not only "bold" but "daring," of accidents which are not only "fatal" but "serious," of faces which are not only "ill-looking" but have a "sinister expression," and of poverty-stricken prisoners who are not only "cadaverous" but "thin" and "pale," and even "emaciated" into the bargain—whereby we are favored with a glimpse of that strangely-redundant being who sometimes figures in our police reports, as a "pale, thin, cadaverous-looking individual who wore a very emaciated appearance."

Having glanced at some of the abuses to which this luckless part of speech is liable, let us now turn to its uses, for in that way we may learn enough of its nature to avoid ill-treating it in future. First, as to its nature. The purpose of language, as we all know, is to transfer ideas from mind to mind. Ideas are mental pictures—it may be of outward objects, it may be of conceptions conjured up in the mind itself. Let us, for the sake of simplicity, confine ourselves to those ideas which are projected upon the mind by outward objects. Now, all outward objects have names—are expressed in language by nouns.

If, strolling on a croquet-ground, I see a ball, I transfer the idea thus photographed upon my mind to that of another by the noun "ball." But a ball, like all other objects, does not merely exist; it has modes or manners of existing. It may be in motion or at rest, in which case we add to the noun a verb, saying the ball is "standing" or "rolling." Motion, again, has *its* modes or manners. The ball may be rolling "swiftly," or "slowly," or "crookedly;" in which case we add an adverb. But, putting aside all question of action and passion, of doing or being done to, let us look upon the ball as an object simply.

Even lying at rest it has its modes or manners of being ; and here we bring in our adjective. The modes of a ball, as of all other objects, may be divided into two classes : *essential* or *accidental*. The *essential* mode of a ball is that it shall be round ; if it is not round, it is not a ball. But, being round, it may be either made of wood or ivory, it may be red, or green, or blue, it may be polished or unpolished. All these are *accidental* modes—modes, that is, not *essential* to its existence as a ball—and, if we want to express these, we have to call in the aid of an adjective. So that we come to this : that, while a noun describes an object in its *essential* mode, a conjoined adjective describes it in its *accidental* modes, expressing in point of fact some special characteristic which is not included in the noun, or name. We may therefore speak of a “hard” ball, and a “round” flint, because hardness is not included in the noun ball, nor roundness in the noun flint. But we may not speak of a “round” ball and a “hard” flint, because roundness *is* included in the noun ball, and hardness in the noun flint. Least of all, are we to use adjectives for which there is no corresponding characteristic mode in the object sought to be described. So that we are entirely debarred from speaking of “beautiful” rounds of beef, and of “splendid” mutton-chops, because “beauty” is not a characteristic of beef, nor “splendor” of mutton-chops.

We have now, if I have made myself clear, got at the nature of adjectives. Let us look next at their capabilities. In their primary use they assist nouns in the description of objects. But they are capable of doing more than this ; they may be so used as to give character and color, not to nouns alone, but to whole word-pictures. They may be made the foliage of the otherwise bare trees of literature, the rills among its mountains, the flowers that nestle among its undergrowth. For proof thereof, listen :

“ Now fades the landscape on the sight,  
And all the air a stillness holds,  
Save where the beetle wheels his flight,  
And tinklings lull the distant folds.”

This is not the stanza as Gray wrote it ; I have deprived it of

four of its adjectives. See what it grows into when these are added :

" Now fades the glimmering landscape on the sight,  
And all the air a solemn stillness holds,  
Save where the beetle wheels his droning flight,  
And drowsy tinklings lull the distant folds."

The adjective "glimmering" has thrown twilight upon the picture; the adjective "solemn" has subdued its gayety; while the adjectives "droning" and "drowsy" almost lull one into pleasing slumber.

There is a certain power in adjectives, too, which may be called their noun-power—a power, that is, which not only gives tone and color to the picture, but adds distinct ideas to it. Gray, for instance—I take him again, having the book in my hand—sings to us of

" The breezy call of incense-breathing morn."

Neither "breezy" nor "incense-breathing" are adjectives which it is absolutely necessary to use. They can scarcely be said to express other than very remote characteristics of the objects which they describe. Yet see what they add to the picture. They introduce both the breeze and the perfume of the flowers with all the effect of nouns. See, again, how good old Bishop Hall takes advantage of this noun-power of the adjective. "How sweetly," he says, "doth music sound in the night season! In the daytime it would not, could not, so much affect the ear; all harmonious sounds are advanced by a *silent* darkness." Here, as we see, the adjective "silent" does not merely qualify the noun "darkness;" it adds to darkness silence—adds, in fact, another noun.

Another subtle power which the adjective possesses is that of giving a glimpse of something exceedingly beautiful, entirely apart from the picture it is employed in painting. We have an example in Milton, where he speaks of philosophy as being "a perpetual feast of *nectared* sweets;" what would otherwise be an ordinary picture is at once suffused with a godlike glow from Olympus, and made luxurious with reminiscences of the dimpled smiles of Hebe.

But, to pursue this part of the subject no further, let us



turn from the nature and characteristics to the employment of the adjective—the proper method of using it in composition. It is very difficult to lay down rules in such a matter; for the use of adjectives, as we have seen, depends very much upon the *purpose* we have in employing them. Take the noun violet for instance. We all understand what that means, and there seems to be no need of an adjective. Nor is there, if we are speaking of a violet without relation to any other object or influence. So, when Shakespeare is speaking of the different kinds of flowers that grow in the hedgerows, he uses the noun simply; but when he is describing the effects of a breeze playing across a flowery bank, he speaks of the “nodding” violet; when describing a posy of mingled colors, he speaks of the “blue” violet; when describing the sweet odors of the morn, he speaks of the “perfumed” violet. While, therefore, as a general rule, it is improper to describe by adjective that which is already included in the noun, exquisite effects may sometimes be produced by pursuing the opposite course, as in this instance from “*Love’s Labor’s Lost* :—

“Daisies *pie*d, and violets *blue*,  
And lady-smocks all *silver-white*,  
And cuckoo-buds of *yellow* hue,  
Do paint the meadows with delight.”

Or in this, from “*Midsummer-Night’s Dream* :—

“You *spotted* snakes with *double* tongue,  
Thorny hedgehogs be not seen;  
Newts and blind-worms do no wrong,  
Come not near our Fairy Queen,  
*Weaving* spiders come not here;  
Hence, you *long-legged* spinners, hence,  
Beetles *black*, approach not near;  
Worm nor snail do no offence.”

But in neither of these cases was it the poet’s intention to limit himself to description of the objects introduced. His purpose was to paint a given kind of pictures for the mind; and he does so by introducing in brilliant confusion a number of dissimilar objects, whose differential characteristics he hits off with pre-Raphaelite accuracy.

But, while adjectives may be thus redundantly used for special kinds of word-painting, they are by no means to be so used in ordinary word-painting. Here the object is terseness—a crowding together of the images in as small a space as is compatible with clearness. For word-pictures stand at this disadvantage when compared with painted pictures: the one, that is the word picture, must be built up before the mind piece by piece; the other flashes upon the sight all at once. The building-up, then, should as a rule be done quickly; and, to be done quickly, as few words as possible should be used. Nouns, therefore, which include the characteristics of their correspondent objects, should be always chosen in preference to those which require adjectives.

In the judicious use of epithets may be discovered the secret power and pointedness of some of the finest writing in the language, just as in their too copious and free use may be traced the dribbling style, and want of effectiveness, of a great deal of what passes for pompous and sensuous style. If epithets are needed to bring out the sense, it is a proof that the nouns they qualify are wanting in definitiveness. If they are not needed to bring out the sense, but are added to express more fully what is stated in the context, or is so implied as to be immediately deducible from it, the style is loaded with verbiage, and the mental activity of the reader is repressed.

It is generally thought that poetry admits, and even requires, greater license in this respect than prose. And this is true. But even in poetry epithets that add nothing to the completeness of the picture detract from its impressiveness.

That there may be the sublimest poetry with few epithets may be shown from the study of the "Inferno" of Dante, or from the "Samson Agonistes" and "Paradise Regained" of Milton; and, to conclude with one selection from Shakespeare, it may be shown how admirable descriptive language may be without a too free use of adjectives:

"The lunatic, the lover, and the poet,  
Are of imagination all compact;  
One sees more devils than vast hell can hold—

That is the madman : the lover, all as frantic,  
Sees Helen's beauty in a brow of Egypt ;  
The poet's eye, in a fine frenzy rolling,  
Doth glance from heaven to earth, from earth to heaven ;  
And, as imagination bodies forth  
The forms of things unknown, the poet's pen  
Turns them to shapes, and gives to airy nothing  
A local habitation and a name."

My object in giving these final extracts is to show that, while adjectives used redundantly may, in certain cases, beautify the composition, equally adequate description is to be obtained by the skilful use of nouns which do not require adjectives.

And my concluding deduction is this : that in commencing a composition the writer should first ask himself the purpose of it. Having ascertained that, he should use his adjectives accordingly. If he desire to suggest more than he has room to say, let him make use of such adjectives as are capable of being endued with the noun-power. If he desire to throw an external light upon his picture, let him edge in an adjective or two which will awaken in the reader a passing memory of some other scene, or land, or age. But if his object be faithful, terse, vivid, powerful description, let him avoid adjectives as he would physic, using them only when there is absolutely no help for it. Let him search diligently for nouns that express his meaning without extraneous aid.—*John Proffatt, in Appletons' Journal.*

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### *NEW BLACKBOARD EXERCISE IN GEOGRAPHY.*

LET a pupil write on the blackboard the name *California*, for example. Now let another, with a wand, point out those letters of this name which spell the name of a city in Egypt (Cairo). Let another point out the letters which spell a cape of Massachusetts. Let others pick out the letters which spell a country of Africa ; a grand division of the globe ; a city in Peru ; a river in South America ; and a lake in Asia. Let the name *Pennsylvania* be written on the

blackboard. Point out the letters which spell a river of Africa ; a country of Europe ; a city of Massachusetts ; a river of Asia ; a river of France ; and a capital of Europe. Write the name *Sacramento*. Point out the letters which spell the names of cities in Italy, in Nevada, in Michigan, and in France ; of countries in Africa, and Asia ; and of rivers in Maine and France. Write *Washington*. Point out the letters which form the name of a peak in California ; of a river in Vermont ; of a grand division ; and of two of the United States. In the name *San Francisco* may be found the letters which spell a city of South America ; a city of the Barbary States ; and a city of Peru. *Yangtse Kiang* furnishes letters to spell a city of New York ; a western State ; a grand division ; and rivers in New York, in Tennessee, and in Hindostan. And the name *Montpelier* yields enough of the alphabet to spell a river of Italy ; a city of Portugal ; and lakes in Ireland and the United States.

C. R. CLARKE.

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## FEMALE EDUCATION.

### SECOND PART.

HAVING shown how the present race of mothers are educated, and what results follow from the existing condition of their education, I shall now dwell upon *the plan for improving this condition*. Before any thing effective can be accomplished, a giant must be overcome. This giant is Fashion. So long as parents believe that the present plan of education for girls is *fashionable*, so long will the teaching remain as it is. The only way to overcome this powerful idol is to induce intelligent parents to take the lead in starting and in practically carrying out a true system of education for their daughters. Acknowledging that such a plan is necessary, and confessing a belief that a sound education will not be able of itself and single handed to work its way, is no doubt a sign of weakness ; but it is useless to ignore facts. While the present fashionable idea of girls' education is in vogue the development of good schools, even if started,

will be tedious and unsatisfactory, as this one great barrier to progress, which is met everywhere, will still be unre-moved.

The work of educating a girl must necessarily be so framed as to be capable of developing into several very different conditions, although these conditions cannot be known at the time the education is begun, or perhaps till after the school period of it is completed. Taking, then, a girl of twelve or thirteen years of age, whose instruction has been conducted on the present fashionable plan, it may be presumed that she can read, write, and know a little of arithmetic, music and needlework, together with a smattering of a few other subjects, ranging with the quality of the school in which she has been a pupil. The real work of education has now to begin, and, in ninety-nine cases out of a hundred, this consists of superficial polish, or "finish." As a rule this polish is a very dangerous advantage. In the material world it is easier to test the workmanship of an article before this polish is laid on, and it is very much the same with education. A girl's mind at twelve expands rapidly and is very susceptible to impressions. The sham of show and superficial accomplishments, however, is very soon learned. The shallowness of the "examination" and "exhibition days" is evident to the pupils; and if their teachers display such hollow principles, it is not surprising if the girls themselves imitate them, and gain the idea that superficial attainments will always pass current as they do at school.

A difference which seems to exist between boys' and girls' education is that with girls the extent of the instruction and the subjects which may be embraced vary more with the age and not so much with the after occupation of the girl. A boy at thirteen or fourteen must undergo a very different course of training, whether he be intended for a lawyer or a merchant, a doctor or a clergyman. With girls, however, the subjects vary as to the number of years which each can devote to study. It is, of course, not expected that all girls should be treated alike, or that one is not naturally more advanced at twelve than another is at fourteen years of age; but, as a general principle, all girls have more or less one great function to prepare for, and that is to be qualified to

direct the household and train the mind. I leave out entirely, in these observations, that higher duty in the political field which some women think the goal of female attainments. I am not writing for them, nor in their interest, but rather in relation to the nobler aspects of the "woman question," as I view it. Their training must be such that should they remain unmarried they will still find themselves fitted for their duties, or should they be required to earn their livelihood they may be prepared.

The subjects of instruction for girls who are kept at school after the age of thirteen should be carefully arranged. Up to that age the instruction should differ but little from that given to children of both sexes, except perhaps that instrumental music may be taught, and some other subjects not so much insisted on.

Animal physiology should certainly be taught to all girls of thirteen. The elementary laws which regulate the human body, the functions of the various parts, the precautions and habits which tend to promote health, and a knowledge of the causes detrimental to full vigor of body and mind, are important to all girls, and are most interesting when properly taught.

Natural history and botany should be among the regular subjects of instruction, and considerable knowledge should be imparted to those who pursue their education until seventeen or eighteen years of age. For interest and practical use such studies cannot be too highly estimated. What mother cannot recall questions from her children concerning the uses of animals and the functions of different specimens both of the animate and inanimate world? Nothing, perhaps, would afford mothers a wider field for advancing their children's education than the scope of natural history and botany. Children never weary of hearing about the habits and uses of animals. Their cats, their dogs, their pigeons, or their rabbits, afford endless variety of topics; nor do they enjoy any thing more than gathering wild flowers, and hearing about the way they grow and what their uses are.

All this they may learn, not through a given lesson, but by an agreeable conversation during a pleasant ramble.

Each truth they gather from a skillful instructor, concerning such things, interests them as much as a well told story.

Drawing should receive attention; but the elementary work of free-hand outline, perspective, and easy examples of light and shade must first be attempted and successfully mastered, though the pupils may not make showy specimens for home inspection and admiration. When girls are older, if they have the time to devote to this practical accomplishment, they can then pursue it with advantage as an intellectual amusement, or as a means of livelihood.

Arithmetic, by some considered almost beneath the notice of young ladies, is an essential for a house-keeper. Such a question as the price of tea per pound when composed of a mixture of three-quarters of a pound of Congou at \$1.37½ a pound and one-quarter of a pound of Pekoe at \$1.18½ a pound, would puzzle, it is feared, half the matrons in the country.

The study of geography and history should not be omitted. The former, in its physical aspect, may be made to give the mind food to work upon and explain topics of interest met with in every day experience. History, in its political, social, and general bearing, may, as the ages of the pupils increase, be introduced with advantage. Girls, with this preparation, will be able to read with profit a variety of books otherwise repulsively dry.

In all subjects of mental instruction, with girls perhaps even more than with boys, the plan of associating experiment and visible illustration should, in all cases, be introduced.

Many girls, though in no way deficient in intelligence, are yet often slow to follow abstract reasoning or to trace the sequence of logical facts, unless interspersed with illustrations, and carefully exemplified step by step.

To the absence of instruction in logical reasoning may be attributed the great difficulty of comprehending a chain of argument, and of accepting a conclusion in a discussion, even though each step, as it followed in regular order, may have been acknowledged.

The physical training of girls is generally capable of great improvement. Dancing is almost always taught, and is con-

sidered so necessary by parents that an extra fee for it can generally be obtained without much difficulty. With this accomplishment few would wish to interfere, but it would be highly desirable, in all cases where this is not already done, to append to it drill and gymnastic exercise. Both of these may be made to benefit the constitution and general bearing of girls, though they must be judiciously superintended by a teacher, and the duration and description of exercise carefully suited to each pupil.

As regards the efficient teaching of needle-work, cooking and other feminine occupations, much was said in the previous article. Such subjects, though not strictly educational, are yet part of the instruction which every girl should receive, and without which she must necessarily be more or less disqualified for her duties in after life. Much greater proficiency is required in these branches. Cooking is rarely, if ever, taught; and though difficulties certainly exist in carrying out practical instruction, yet its evident use to all girls who hope to become accomplished house-keepers—and what sensible American girl does not so hope?—renders it most desirable that steps should be taken to supply this deficiency.

The general idea which I wish to convey by these remarks is the necessity for the complete abolition of all the superficial work now done in the schools of which I have been speaking. The endless piano-playing, the smattering of French, Italian, drawing; the useless fancy work, and other "elegant accomplishments," as they are usually taught, can not be looked upon as education. No one would wish to dispose of the elegant accomplishments of which I have spoken, but surely they should not be made the foundation of education.

A girl trained in the elementary laws of physiology, natural history, and botany, in addition to being really grounded in the more ordinary subjects now so often but nominally taught at school, would, at sixteen or seventeen years of age, be really in such a position that, come what might, she would be prepared for it. After leaving school, or giving up her private masters at home, she would be qualified to pursue her education by herself; and this is a most



important consideration. As at present brought up, very few girls ever think of doing this, nor are they competent to make the attempt, even if they have the inclination. Those who married early would be fitted for training their families and for the various other duties of society. Those whose lot it was to remain single would have occupations to fall back upon, and means of profitably and intellectually employing their time for their own, as well as for their neighbors' benefit.

The proper and efficient education of girls, it must be urged, is not only a matter of private importance, but it is really one that affects, to a very great extent, the national well being. The nation is made up of a number of units, and these units each and every one of them, are immensely influenced by the training and rearing of their mothers—to say nothing of the influence which sisters have on one another and on their brothers. Much has been done by the great and meritorious common school system of the country in this direction, but it is unfortunately the fact that these schools have little influence on the final training of what may be termed well-to-do American girls. Fashion decrees that they must be sent to “a finishing establishment,” and here, as a rule, they are polished off, so to speak, with rouge and powder. Against this pernicious practice no time should be lost in awakening public opinion. We should have a completely new and improved system of providing for the efficient education of girls. I shall be rejoiced if what I have written conduces to this end. G. R. C.

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THE phrase “too thin”—generally regarded as slang—has a very high authority. In act 5, scene 2, of Henry VIII, the Monarch retorts as follows to the fulsome adulations of the Bishop of Winchester:—

“ You were ever good at sudden commendations,  
Bishop of Winchester. But know I come not  
To hear such flattery now, and in my presence  
They are *too thin* and base to hide offences.”

*HOW COMMON WINDOW GLASS IS MADE.*

**I**F you ever visit Pittsburg, in Pennsylvania, you must go into the window-glass factories there; you will find them very curious. Their furnace, in the first place, is built in the ancient style; it has no chimney, and the smoke from the bituminous coal they burn, pours out in a cloud into the room. There are openings in the roof for it to escape through, and a continual draft of air from the doors carries it upward, so that it is not so bad for the workmen as one would think. Besides, they do not begin to blow until the smoke is all burnt off.

There are five pots on each side of the furnace; and you will see five men in a row, blowing all at once, with the regularity of a file of soldiers exercising. Each gathers thirty or forty pounds of metal on his pipe, which is very long and strong. They stand on platforms, to get room to swing the glass, as they blow it. The five men begin to blow and swing all together. Each blows a great globe of glass, which is stretched out gradually by the swinging motion into a cylinder, or roller, as it is called, five feet long. Then the five rollers are swung up towards the furnace holes, and five other soldiers spring forward with their guns—which in this case are iron bars that they set upright under the five blowing pipes to support them while the rollers are being reheated in the necks of the pots. The blowers blow in the necks of the pipes with all their might, then clap their thumbs over the holes to prevent the air from rushing out again; in the meantime the end of the roller is softened, so that at last the air, forced in and expanded by the heat, bursts it outward. The glass is then a cylinder, open at one end. It is whirled in the heat until the edges become true, then brought away—the five iron supporters dropping to the ground with a simultaneous clang. The cylinders are laid on tables, where the imperfect spherical end about the blowing pipe is cracked off from the rest by a strip of melted glass drawn around it. The cylinder is then cracked from end to end on one side by means of a red-hot iron passed through it.

In the adjoining building is what is called the flattening oven. The cylinders brought there are lifted on the end of a lever, passed in through a circular opening just large enough to admit them, and laid on flattening stones on the oven bottom, with the crack uppermost. The oven bottom is circular, and it revolves horizontally. As the glass softens it separates at the crack, and lays itself down gently and gradually on the stone. The long cylinder is then a flat sheet, three feet wide and nearly five feet in length. There are four openings around the sides of the oven; at one the glass is put in, through another a workman sweeps a stone for it, a third workman smoothes it down with a block as it comes round to him, and a fourth, at the last opening, which is close to the one at which it was put in, lifts the sheet—partly cooled by this time—upon a carriage in the oven. This he does by means of a lever furnished with sharp, broad blades at the end, which he works in under the glass. When the carriage is full it is run through an annealing oven beyond.

The opposite end of the annealing oven opens into the cutting room. There carriages are pushed along a central track, and unloaded at the stalls of the cutters. The cutter has a table before him, with measure marks on its edges. He lifts one of the sheets, lays it on a table, and commences ruling it faster than a school boy rules his slate. His ruler is a wooden rod five feet long, and his pencil point is a diamond. Every stroke is cut. Not that it cuts the glass quite apart; indeed he seems scarcely to make a scratch. Yet that scratch has the effect of cracking the glass quite through, so that it breaks clean off at the slightest pressure. In this way the sheets are put up into panes of the required size.

I remember one workman told me that a single diamond would last him two or three years. It has fifteen or sixteen different edges, and when one edge is worn he uses another. South American diamonds, such as he used, cost, he told me, from six to thirty dollars each; and when they are worn out for his purposes, he sells them for jewels to be put in watches.

## GEOGRAPHICAL NOTES.

UNITED STATES.—Clement Powell, a companion of Major Powell in the exploration of the Colorado River, writes to the *Chicago Tribune* (issue of January 20) a letter dated Oct. 10, 1871, at House Rock Springs, Arizona Territory. The diary is continued from Sept. 24, when the voyagers were in the midst of Cataract Cañon, 40 miles long, from which they passed successfully through Mille Crag Bend, five miles, Narrow Cañon, seven miles, full of sulphur springs and ending at Dirty Devil's River, whence there remained a course of 145 miles to the Crossing of the Fathers (El Vado de los Padres), on the line between Utah and Arizona. This was divided into Mound Cañon, ending at the River San Juan, and Monument Cañon. At the Crossing, the party renewed its supplies of all kinds, including photographic, for lack of which, after leaving Dirty Devil's River, no views could be taken. Major Powell and his assistant returned to Salt Lake City. The rest of the expedition, after a fortnight's rest, were to push on for Patona River, 45 miles below—a two weeks' journey, unlike that just achieved with a current running at a mile an hour. The homeward trip will not be begun till September of the present year. In Cataract Cañon the walls tower 3,000 feet above the water-level.

"We see the sun rise over one bank at 8 o'clock in the morning, and disappear over the other at 3 P. M. Looking upward, a slender patch of blue sky shows through the narrow cutting, thickly sprinkled with stars at night. With this exception, the cliffs and river bound our daily views. At noon, the thermometer ranges from 90 to 94 degrees in the shade; nights and mornings are cool."

Further on, the mercury stood at 105 degrees in the shade at midday, and in Mille Crag Bend at 100 degrees at 2 P. M. In the limestone walls of these cañons, caves of various sizes are frequent and afford shelter from the weather. The finest met with was Music Temple, two miles below River San Juan, in Monument Cañon:

"It is a vast amphitheatre, cut by the water from the soft rock, and lighted by a narrow skylight, worn by a little stream working busily through the ages. At the entrance, four tall and slender cotton-

woods stand. Following a winding gorge, we turn a corner, and gaze admiringly at this freak of the floods. A vaulted roof stands over a spacious hall 320 by 520 feet in width and length, a floor of gravel, and, at the further end, a pool of water."

In the lower part of Mound Cañon, so named from the rounding summits of the cliffs,

"The river wends tortuously between high walls of orange-tinted stone, checkered here and there with broad bands of black, where the rains have stained them. This beautiful cañon abounds in miniature parks, lying between the two lines of cliffs [viz., the exterior 'mound' cliffs and the lower ones near the river], where trees and flowers cluster. Islands at intervals, and rapids."

"The walls of Monument Cañon are nearly vertical, and are 1,500 feet high, cut through by many transverse and narrow cañons. Giant statues, from 500 to 800 feet in height, rise from the river's boundary, and tower above the plateau beyond. On a straight stretch of river, this undulating line of peaks, with flanking sentinels, shows finely."

Some ruins of aboriginal houses and temples with traces of picture-writing were observed, and numerous relics in the shape of pottery, flints, etc. Four miles above the Crossing:

"The ancient Indians evidently got supplies of water at this point. Steps cut in the stone lead up the cañon wall, and in several places their rude records can still be traced on flat surfaces of rock about the stairway."

Two miners who met the party at House Rock Springs washed some of the sand shore for gold, and "soon obtained a few grains of the precious metal." They were certain that in the rapids "gold could be got by the handful."

—The Yale Exploring Expedition of 1871 returned in the middle of January, having made extraordinary collections of fossil remains and added not a little to our knowledge of the far-western territory. Led by Prof. O. C. Marsh, who had twelve assistants, graduates of Yale, it first examined the region along the Smoky Hill River, within a radius of fifty miles from Fort Wallace, which is near the Colorado frontier. Here tons of fossil remains were secured, embracing many new species of extinct birds, reptiles, and fishes, and huge skeletons ninety feet in length. The second region explored, using Fort Bridger as a base, was the tertiary lake basin drained by the Green River, in the

south-western corner of Wyoming, and the Uintah Mountains, just over the border, in Utah. Though 7000 feet above the sea, there was no lack of fossils, those of small animals being particularly abundant. The last trip was from Kelton, on the Pacific R. R., to Boise City in Idaho, *via* the Snake River and Shoshone Falls; thence down the John Day River to Cañon City, in Oregon. In the cañons in this vicinity the party was richly rewarded for its pains. The return was by way of the Columbia River and Portland. Prof. Marsh and some others, taking the steamer at San Francisco, were enabled to make collections on the Isthmus, and even to secure "some very valuable antiquities from the ruins of Central America." The expedition bore its own expenses, amounting to nearly \$15,000. (See *Yale Courant*, of Feb. 3.) A large number of fossil horses were discovered only two feet in height.

—The United States is invited to accept and complete the James River and Kanawha Canal, which now extends from Richmond to Buchanan—about forty miles from the West Virginia border. As a State enterprise it appears to be a failure, and the importance of connecting the Ohio River with tide-water is so obvious in a military as well as in a commercial point of view, that it may very properly be made a national undertaking.

—The Coast Survey Expedition under Mr. W. H. Dall, to explore the hydrography and natural history of Alaska, reached the harbor of Iliuliuk, Island of Unalashka, Sept. 23, 1871, in twenty-six days from San Francisco. A chart of the harbor was, Oct. 30, well under way. The temperature had averaged 44° Fahr.

—M. Octave Pavy, a young Frenchman, adventurous and wealthy, has conferred in St. Louis with Capt. Silas Bent, in regard to his theory of an open polar sea, and the natural gate to it, through Behring's Straits, which was fully set forth in the *Missouri Republican* of Jan. 7. An apparent disciple of Capt. Bent, M. Pavy leaves San Francisco this spring for Petrozavodsk (qu. Petropaulovski?). After sailing through the Straits, he will make for land lying between

71 and 80 degrees of latitude, which he will cross on sledges, and then launch a rubber raft that cannot be upset, and which he expects to freight with five men, 100 reindeer, 40 dogs, etc., with provisions for six months. All this, provided the open sea lies beyond the land in question. He will then steer for Greenland or Spitzbergen. He will perhaps meet in this voyage Prof. Nordensköld, of Stockholm, who is preparing to sail for Spitzbergen and the islands beyond, of which the northernmost is in lat.  $80^{\circ} 42'$ . On one of these he expects to winter in a house he takes with him in sections, and to resume operations in the spring of 1873. Last year, this explorer traveled extensively in Greenland.

WEST INDIES.—In the new cemetery at Havana, a grand monument is to be erected in honor of Columbus, to which his remains will then be transferred from the Cathedral in which they now lie.

SOUTH AMERICA.—Numerous railroad enterprises are in progress or contemplated in Brazil, with the object of unifying its southern tier of provinces and promoting immigration. The government is also favoring a line to connect the Amazon *via* the Madeira with Bolivia, while Peru, on the other hand, is constructing a road from the port of Islay *via* Arequipa to Puno, on Lake Titicaca, and the Argentine Republic is asked to subsidize a narrow-gauge road up the valley of the Pilcomayo, starting from Villa Occidental on the river Paraguay, which would bring the silver mines of Potosi within four days of Buenos Ayres. The Brazilian scheme is in the hands of Mr. George E. Church, an American engineer, and requires 170 miles of rail. The Peruvian road has been contracted for by Mr. Harry Meiggs, also an American, and is completed from the coast to Arequipa, 100 miles, the remaining distance being 220—the greatest elevation on the latter section being 14,600 feet above sea level, and the cuts and “fills” being very heavy. An engineer on the Arequipa end of this section writes: “A more desolate, barren waste than that through which we are now locating could scarcely be conceived, and the climate is the worst I have ever experienced. The nights are extremely cold, and during the day we have a wind that cuts the skin

off your nose, lips and cheeks as effectively as if it had been done with a keen razor." The Argentine road was projected by Mr. Edward A. Hopkins, a Vermonter, long resident in South America, and is estimated at 285 geographical miles.

—Oran, in the province of Jujuy, on the Bolivian frontier of the Argentine Republic, was destroyed by an earthquake lasting nine hours, Oct. 22, 1871. But one life was lost, the inhabitants having fled to the open country. The ruin of the town was complete in ten minutes, but no less than forty shocks occurred before the earthquake ceased.

AFRICA.—More *Herald* dispatches from its Livingstone expedition. Mr. Herbert M. Stanley, according to advices from Zanzibar, Dec. 16, 1871, which reached London Feb. 12, left Unyanyembe on the 30th of August for Ogara, a twenty days' march, and arrived in good health, having accomplished half the distance to Ujiji. Dec. 8, there was a rumor at Zanzibar, not credited, of Mr. Stanley's death. The London Relief Expedition left in February for Zanzibar, *via* the Suez Canal, Mr. W. O. Livingstone, the explorer's son, being of the party.

—Since Sir Roderick Murchison predicted, from geological analogy, the discovery of gold in Australia, science has not been credited with any similar "practical" achievement. Cap. Richard F. Burton, however, whose long-delayed work on Zanzibar is announced below, writes to the *Athenæum* of Jan. 20, that he was in Brazil in 1867, and visited the Itacolumite regions of Minas Geraes and the Diamantine country in early July :

"Until then," says he, "it had been the general belief that diamonds were confined to a zone bounded by lat. (north or south) 15°—2°, the sole recognized exceptions being the equatorial diggings of Borneo and Malacca. The aspect of Minas Geraes at once assured me that the precious stone, so far from being limited to that area, would be found scattered over many parts of the world, and, in writing the 'Highlands of the Brazil' (vol. 2, vi., p. 80), I had hoped to announce the theory to a practical public. Unfortunately my absence in Paraguay and other parts of South America delayed the printing of the book, and Messrs. Tinsley were unable to bring it out before December 17, 1868. Meanwhile the diamond had been discovered at some fifteen places in California, in Australia, and north of the Cape, and announced by the *Melbourne Argus* and the *Colesburg Advertiser*.



Pretending to little more of science than what is known to the majority of educated Englishmen, I have therefore, if the analogy be correct, performed a great feat of induction without ever being aware of its being a feat, or without the slightest importance being attached to it by myself or others."

OCEANICA.—In December, 1871, a telegraph cable was laid between Java and Australia. The Australian governments proposed to "charter" a steamer to convey dispatches from the terminus, Port Darwin, to Normantown, pending the completion of the overland line.

—An expedition to explore New Guinea was to leave Australia early this year. This comparatively unknown island, recently ceded by the Dutch to Great Britain, has already been invaded by the missionaries, who have been well received by the natives. Rev. Messrs. Murray and Macfarlane, the pioneers, were sent out by the London Missionary Society. They report :

"We were much pleased with the appearance of the people of these islands. They are genuine Papuans, dark colored, their hair slightly curled, tall and well proportioned, some of them having very good features. Many are as much as five feet ten inches in height, and muscular in proportion. They do not wear any clothing, and but few ornaments; nor do they seem to use paint, as do the natives of New Hebrides and other dark races."

ASIA.—Intelligence reached St. Petersburg, Jan. 28, of the total destruction the day before, by earthquake, of Shamaka (whether the new or old town of that name, is not clear), 75 miles west of Bakoo, in Transcaucasia, on the Caspian. The shocks were very protracted, and many lives were lost.

—Dr. Gustav Radde, director of the Natural History Museum at Tiflis, returned in December from an interesting journey of three months to the head waters of the Euphrates. Early in August, in company with Dr. Siewers, a young geologist, he ascended the Great Ararat, and reached an altitude of 14,233 feet above the sea level. Their botanical collections were especially rich.

—Telegraphic communication between Nagasaki and Europe through Siberia *via* Vladivostock, was established in November. The promptness with which the Japanese

avail themselves of the telegraph was shown on a recent occasion when an American named Rogers, accused of forging and uttering *Kinsats*, left the country and went to Shanghai. As soon as this became known they telegraphed to their representative in that city, who applied to the American consulate to have the man arrested *on his arrival*. The steamer was searched in vain, but Rogers was subsequently discovered ashore under an assumed name and remanded.

—The political and social revolution in Japan is so rapid that it is difficult to keep pace with it. Here is an account, from the *Japan Herald*, of a class that will soon pass out of mind :

"Some half year or more ago the *Yetas*—the pariahs of Japan, and the only *caste* in the country—petitioned the government to have their disabilities removed, and to be admitted to participate in the common privileges of the land. We printed a translation of the petition of these people at the time, and urged its prayer to the favorable consideration of the government. It is gratifying to learn from a proclamation just issued by the Mikado, that this objectionable and objectless class distinction has, after existing for centuries, been at length abolished. According to the census, the *Yetas* numbered in all no less than 460,000 persons. The origin of the distinction that was made with regard to this section of the inhabitants is lost in the mists of obscurity. Vague tradition asserts that they have descended from captives made in war, in the Corea, or were possibly derived from the aboriginal race of Japan. Perhaps Buddhism may have had its influence in isolating those adjudged impure from their unclean avocations, such as tanners, etc., until finally they constituted a separate and separated class, and were treated with such aversion that they were prevented from engaging in ordinary business; they were deprived of public rights, and were compelled to live in villages exclusively appropriated to them, constituting a despised and oppressed class. Nevertheless, in process of time, by the pursuit of such industrial avocations as were permitted them, some became very wealthy, and by possessing themselves of education, which the dominant classes were powerless to prevent, raised themselves, within their own circles, in the social scale. In their personal appearance there is nothing physically peculiar to mark their belonging to a degraded class, and now their admission into general society is no longer vetoed, they will soon become merged into the general population of these islands."

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review in the *Athenæum* of Jan. 27.)—CARLISLE, A. D. Round the World in 1870: an account of a brief tour through India, China, Japan, California, and South America. 8vo, 408 pp. London, 1872. (See review in *London Book-seller*, Feb. 2, 1872.)—Geological Survey of Ohio. By J. S. NEWBERRY and assistants. 8vo, 555 pp. Columbus, 1871.—DIXON, WILLIAM HEPWORTH. The Switzers. London, 1872. (See *Athenæum*, Jan. 13.)—GILLMORE, PARKER. Prairie Farms and Prairie Folk. 2 vols. London, 1872. (See review *ibid.*)—HAYES, ISAAC I. The Land of Desolation; being a Personal Narrative of Adventure in Greenland. London, New York: Harper & Bros., 1872. (See review *ibid.*)—REED, SILAS, Surveyor-General of Wyoming Territory. Report for 1871. Washington, D. C.—STEIN, C. G. D., and HÖRSCHELMANN, F. [Handbuch der Geographie und Statistik]. Manual of Geography and Statistics. 9 vols. Leipzig, 1871.—[Trois ans en Italie, etc.] Three Years in Italy, followed by a Voyage in Greece. By a Brazilian lady. Paris, 1872.—Periodical Literature: "The Lofoden Islands," (from *Fraser's Magazine*), in *Littell's Living Age* of Jan. 13. "Heroes of Central Africa," (from the *Dublin University Magazine*), in *Every Saturday* of Jan. 13. "Quaint Customs in Kwei-chow," (from the *Cornhill Magazine*); and "City Life in the Capital of the Oezbegs," by Arminius Vámbéry, (from *Good Words*), in *Every Saturday* of Jan. 20. "German Explorations in Africa," in the *Methodist Quarterly Review* for January. [Die erste deutsche Gesandtschaft im Sudan]. "The First German Embassy to Soudan," in *Im neuen Reich*, No. 45, Nov. 10, 1871. [Russische Arbeiten über Asien aus dem Jahre 1870]. "Russian Explorations in Asia in 1870," in the *Journal* of the Berlin Geographical Society, No. 35.

*Cartography*.—Maps of Yellowstone lake, Wyoming Territory, and of the region set apart by Congress for a National Park. U. S. Geological Survey of the Territories; F. V. HAYDEN in charge. Washington, 1872.

—We are glad to hear that Prof. Vámbéry has nearly finished the history of Bokhara and Transoxania, founded on Oriental manuscripts brought from Central Asia, partly by the author himself, partly by the late Sir Alexander Burnes, and other recent travelers.

It begins at the Ante-Islamite period, and finishes with the Russian conquest of Samarkand.—*Athenæum*, Dec. 23, 1871.

—The editorship of the well-known geographical paper, *Ausland*, has passed into the hands of Mr. Frederic von Hellwald, who by various writings in the field of physical and political geography, such as *Die Zuydersee*, *Die Russen in Centralasien*, and others, has deservedly gained the reputation of an accomplished scholar.—*Ibid*.

—Works of travel and geographical research published in England in 1871, amounted, according to the *Publishers' Circular* for Dec. 30, to 233. Of these 27 were American importations; 62 were new editions; and 144 were wholly new works, many of them, however, translations. The *Circular* selects the following as the most notable: Hare's *Walks in Rome*; Tollemache's *Spanish Towns and Pictures*; Leslie Stephen's *Play Ground of Europe*; Buchanan's *Land of Lorne*; Oxenden's *First Year in Canada*; Russell's *Pau and Pyrenees*; Raymond's *Mines of the Rocky Mountains*; Herbert Barry's *Russia in 1870*; Stanley's *New Sea and Old Land*; Elliott's *Mysore*; Guinnard's *Patagonians*; Mrs. Harvey's *Turkish Harems*; Macleod's *Peeps at the Far East*; Huyshé's *Red River Exploration*; Kingsley's *At Last (West Indies)*; Tyndall's *Hours in the Alps*; Campbell's *How to See Norway*; Bowring's *Eastern Experiences*; Harcourt's *Himalayan Districts of Kooloo*; Brown's *Coalfields of Cape Breton*; Ogier's *The Fortunate Isles*; Shaw's *High Tartary*; Murray's *Handbook of Asia*.

*Obituary*.—October 10, 1871, in Nicaragua, of fever, Dr. BERTHOLD SEEMANN, a most enterprising traveler and naturalist. Born at Hanover in 1825, Dr. Seemann was, in 1846, appointed naturalist to H.M.S. *Herald*, in its survey of the Pacific, during which voyage he had the opportunity of exploring, more thoroughly than almost any other European, the Pacific countries of South America and the Isthmus of Panama. In the same vessel he subsequently visited the Arctic regions, and the "Narrative of the Voyage of H.M.S. *Herald*," by Sir John Richardson and Dr. Seemann, is an important contribution to the natural history of previously little-known regions, the portion contributed by the latter comprising an account of the flora of Western Eskimo-land, north-western Mexico, the Isthmus of Panama, and the island of Hong-Kong. In 1860 he was sent by the English Government to the Fiji Islands, then lately acquired, and on his return published two works, one, "Viti," containing a narrative of his mission, the other, under the title of "Flora Vitiensis," a history of the vegetable productions of the islands. Since 1864, he has been greatly interested in the mining capabilities and other resources of the various states of Central America, and has spent much of his time there in the interest of different trading communities, and in promoting the route across the Isthmus. To this part of his experience we owe his work called "Dottings on the Roadside in Panama, Nicaragua, Mosquito." Dr. Seemann is the author of several popular botanical works in German and English, and has been since its foundation, Editor of the *Journal of Botany, British and Foreign*. His successor at that post is Dr. Trimen, of the British Museum.—*Nature*, Dec. 21 and 28, and *Athenæum*, Dec. 23, 1871.

—Capt. JOHN WOOD, of the Indian Army, who died near the close of 1871, discovered the source of the Oxus in 1838, for which he received the gold medal of the Royal Geographical Society.

*COMPULSORY EDUCATION.*

THERE is no doubt that the time has arrived for the introduction of just laws throughout the country. During the first years of the national existence, and especially in New England and the States peopled from that region, there was so strong an impression among the common people, of the immense importance of a system of free instruction for all, that no laws or regulations were necessary to enforce it. Our ancestors were only too eager to secure mental training for themselves, and opportunities of education for their children. The public property in lands was, in many States, early set aside for purposes of school and college education; and the poorest farmers and laboring people often succeeded in obtaining for their families and descendants the best intellectual training which the country could then bestow.

But all this has greatly changed, in New England and other portions of the country. Owing to foreign immigration and to unequal distribution of wealth, large numbers of people have grown up without the rudiments even of common-school education. Thus, according to the report of 1871 of the National Commissioners of Education, there are in the New England States 195,963 persons over ten years of age who cannot write, and, therefore, are classed as "illiterates." In New York State the number reaches the astounding height of 241,152, of whom 10,639 are of the colored race. In Pennsylvania the number is 222,356; in Ohio, 173,172, and throughout the Union the population of the illiterates sums up the fearful amount of 5,660,074. In New York State the number of illiterate minors, between ten and twenty-one years, amounts to 42,405. In this city there are 62,238 persons over ten who cannot write, of whom 53,791 are of foreign birth. Of minors between ten and twenty-one, there are here 8,017 illiterates.

Now it must be manifest to the dullest mind, that a Republic like ours, resting on universal suffrage, is in the utmost danger from such a mass of ignorance at its foundation. That nearly six persons (5.7) in every one hundred in the Northern States should be uneducated, and thirty out

of the hundred in the Southern, is certainly an alarming fact. From this dense, ignorant multitude of human beings proceed most of the crimes of the community; these are the tools of unprincipled politicians; these form "the dangerous classes" of the city. So strongly has this danger been felt, especially from the ignorant masses of the Southern States, both black and white, that Congress has organized a National Bureau of Education, and, for the first time in our history, is taking upon itself, to a limited degree, the care of education in the States. The law making appropriations of public lands for purposes of education, in proportion to the illiteracy of each State, will undoubtedly at some period be passed, and then encouragement will be given by the Federal Government to universal popular education. As long as five millions of our people cannot write, there is no wisdom in arguing against interference of the general Government in so vital a matter.

During the past two years, all intelligent Americans have been struck by the excellent discipline and immense, well-directed energy shown by the Prussian nation—plainly the results of the universal and enforced education of the people. The leading Power of Europe evidently bases its strength on the law of Compulsory Education. Very earnest attention has been given in this country to the subject. Several States are approaching the adoption of such a law. California is reported to favor it, as well as Illinois. Massachusetts, Rhode Island, and Connecticut have begun compulsory education by their legislation on factory children, compelling parents to educate their children a certain number of hours each day. Even Great Britain is drawing near it by her late school acts, and must eventually pass such laws. In our own State, where, of all the free States, the greatest illiteracy exists, there has been much backwardness in this matter. But under the new movement for reform, our citizens must see where the root of all their troubles lies. The Tweeds and Halls and Sweenys of this city would never have won their amazing power but for those sixty thousand persons in this city who never read or write. It is this class and their associates who made these politicians what they were.

We need, in the interests of public order, of liberty, of property, for the sake of our own safety and the endurance of free institutions here, a strict and careful law which shall compel every minor to learn to read and write, under severe penalties, in case of disobedience. With such a law should be passed an act requiring school-masters and Boards of Education to open half-time schools, for those children who are compelled to be engaged in manual labor a portion of the day.—*New York Times.*

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*A GOOD LETTER ON HEALTH.*

**M**R. EDITOR,—I was talking with my friend, Prof. C., not long ago, when he said to me with some emphasis:

“Health is the grand requisite in a teacher.”

“You consider it the first thing, the second thing, the third thing?”

“Yes, I do. Most of our teachers are diseased. Female teachers especially. *They are all so,*” said he warmly.

I began to think of my own experience hygienically, and whether I really ought not to write it out and print it for the benefit and encouragement of the fraternity.

Fifteen years ago I went to L—— to take charge of a little school. I had been suffering with chills and fever until I was almost weary of life. It was the month of January when I began my labors, and the winter was one of uncommon severity. I was seized with a cold and a cough and a spitting of blood. Oh, what a dismal epoch in my life! How I sighed for the sunny south with its orange groves—

“The land of the cypress and myrtle.”

It has since amused me to learn what an impression I made upon strangers. A gentleman, whom I afterwards knew well, has often said laughingly that he wondered what sour looking man that was who passed his house every day, and several ladies cried out against an old friend of mine and his

wife for taking in that "solemn" man as a boarder. I submit that chills, colds, coughs, blood-spitting and poverty, in addition to the apparent blighting of all one's hopes in life, authorize a man to be somewhat grim-visaged—if anything does.

Meanwhile I had procured quite a private apothecary's shop of bottles, among which somebody's sarsaparilla was conspicuous. My uncle, calling to see me one day, got a glimpse of these treasures, as I chanced to open a wardrobe door.

"Why, what is all that?" said he.

"My medicines," I answered, with a smile. He suggested that I should throw them all away, and I did so gradually, or I doubt whether I should have been here to-day to tell that or any other tale.

"Throw physic to the dogs,"

is a pretty good rule, though it has its exceptions. I have, a few times in my life, been greatly benefitted by a *little judicious medication* at the hands of skillful physicians.

As warm weather came on, I grew better, but in the summer vacation had another terrible attack of chills at a watering place to which I had repaired for the benefit of my health!

It was with considerable difficulty that I got back to L—, a month after the time for the autumnal session. Reaching my boarding-house about noon, I sank down exhausted upon a sofa in the parlor, and a commiserating female friend told my landlady that I was in a decline.

Rallying from this by the aid of a physician, I got along pretty well until winter came on. Then a pain in my side, and the remembrance of the preceding winter, caused me to do as N. P. Willis says he did; I put on my cap for a brown study. I thought particularly of one day of my boyhood in which I was trudging along merrily through the snow toward the grammar school, my bosom open absolutely to the skin. A gentleman said to me, "You will take your death of cold." "Oh, no," I replied, "I am as warm as I can be." But now I was shuddering at the approach of cold weather.

The result of the brown study was that I must take my



chance of two things : I must be a decorous, staid, but sickly man, or a healthful boy.

My pupils were getting their skates in order. Said I, "Boys, if I had a pair of skates, I believe I would go out with you on the pond." "O do! Yes! We'll get you a pair of skates. We'll all throw in and buy you a pair."

I allowed them to do so, mentally reserving the right to repay them at some other time.

So, out we went. I had grown rusty in the art, my skates were not put on tight enough—in a word, some one gave me a chase, and slip! down on the ice! roll over and over! Very undignified. But up and off again with more care, and that pain left my side not to return. I could take a full breath without a pang.

Then came snow-balling, and foot-balling, town-ball and "cat." Blessed be the man who invented balls. Then incessant walking. My wife would say, "Oh, please, do not go out to-day, the weather is so bad;" but I had taken the bit in my teeth, and accordingly signified that death out of doors was as good as death in doors, and out I would sally. About three times in 365, I went out when I should have stayed in. The other 362 times it was best to brave the weather.

A word about diet. An old school physician, with no vegetarian tendencies, forbade my eating meat for a while, but allowed me eggs, milk, bread, butter and vegetables. Next he augmented the larder by the addition of mutton and poultry. Afterwards I added beef, and, in the course of time, ham, and now can manage anything edible except boiled and fried cabbage, molasses and sweet milk. Sweet milk may be nature's own food, but it disagrees with many persons. My eyes very slowly opened to the conviction that it did not agree with me, whether it ought to or not. I mention this in order to exhort all my readers to eat only what agrees with them individually, in spite of every rule or regulation, scientific or vulgar. Indeed, sensible physicians now give this advice. There is no accounting for digestive idiosyncrasies.

What has been the result of all this? Last year I had a school catalogue of more than two hundred pupils. With-

out physical health I could have done nothing. As it was I taught several branches myself; did the duties of financial agent, and in a large measure those of steward also; read, traveled, preached occasionally, attended to the correspondence of the institution, superintended repairs, heard reports from classes, and did whatever else was needful to be done. I have not gone into a decline; have not abandoned my calling to turn farmer, merchant, or mechanic; am not pale or dyspeptic; have not grown nervous and delicate; have supported my family comfortably; and hope to serve my generation for a good while to come.

Now, Mr. Editor, if our teachers will not overwork themselves, will not keep private apothecary shops on mantelpieces and in wardrobes, will take but little medicine and then on the advice of the most sensible and judicious physicians, will exercise suitably in the open air, will eat such food as agrees with them, and not mope and brood,—they can regain lost health, and live to a good old age in the profession.

Take courage, then, brethren of the craft. Learn the laws of hygeia and obey them, and it will be well with you. But, as Dr. Franklin pithily says, "If you disobey Nature, she will rap your knuckles."

A PRINCIPAL.

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### *MORE REVISION REQUISITE.*

A CORRESPONDENT of the *Evening Post* cuts up the lexicographers in the following happy style:

"I see by the daily journals that a respectable Hebrew has taken exception to Webster and Worcester's use of the word 'Jew' as a verb, meaning 'to cheat' or 'to cheapen,' with such effect that the publishers of the dictionaries propose to modify the objectionable definition, or to omit it altogether. Encouraged by the success of the Protestant Hebrew, an 'American Catholic' demands that the publishers shall omit the word 'Jesuitical,' or change the definitions 'crafty, artful, deceitful,' etc., which are asserted to be as insulting to the Catholics as the Jew definitions are to

the Hebrews. Very well ; but while these revisions are in order, they may as well be thorough ; and as the representative of a family which is fully as large as Abraham's, at least before the promise that his seed should be as the sand on the sea shore (and a comparative census is even now challenged), I call the attention of the publishers of both Worcester and Webster to their definitive remarks upon Smith. A Smith, they say, is 'one who forges'—I think this is actionable—and they further define a Smith to be 'a worker in metals,' which is equally applicable to the manufacturer of counterfeit coin. If the sensitive feelings of the Jews and the Catholics are to be considered, surely the claims of the numerous and rapidly spreading sect of Smiths are not to be ignored ; and I hereby call upon the publishers of the two dictionaries to modify or omit their insulting remarks about the Smiths. It may be added, too, that these dictionaries, recklessly regardless of recent legislation in Congress, make invidious distinctions between black Smiths and white Smiths, by no means in accordance with the advanced spirit of the times.

" 216 Baxter street (rear).

J. SMITH."

" Mr. Smith" might have made appropriate mention of a certain enterprising school-book publisher of this city. Not many years ago he erased, from his popular spelling book, certain words, to please, as he hoped, the people of a section of our country.

Of course, if the ignorant and biased are permitted to meddle with our Dictionaries, their work will require frequent revisions. And at best such work will enjoy short life, and partisan glory.

The enlightened and conscientious lexicographer can have nothing to do with the passions of the hour, nor with the prejudices of a class, however large or influential.

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A SINGLE sheet of paper was recently made at Cohoes, N. Y., forty-four inches wide and a fraction over twenty-five miles long, and the weight was 10,050 pounds.

*EDUCATIONAL INTELLIGENCE.*

WHEELING, W. VA.—Little more than twenty-three years have elapsed since the first establishment of public schools in the city of Wheeling. The Superintendent of Public Schools reports now as follows: Assessed valuation of real and personal property in the city, \$13,025,298.06; estimated true value of real and personal property in the city, \$30,000,000; estimated true value of all school property, real and personal, \$151,500; total enrollment in the schools during the year ending June 30, 1871, 3,450; average monthly enrollment in the schools during the year ending June 30, 1871, 2,333; number of teachers employed (including seven special of German), 65; amount paid for teachers' salaries, \$29,562.50; amount paid for all other school purposes, except permanent improvements, \$8,426.93; total cost of operating the schools for the year, \$37,989.43; cost, per pupil, for tuition (teachers' salaries,) based on average monthly enrollment, \$12.67; cost, per pupil, for all other objects, except permanent improvements, \$3.61; total cost, per pupil, \$16.28.

SCOTLAND.—Efforts are being made for the promotion of science and art instruction in Scotland. The local papers report a series of meetings in the large towns, which appear to have been fairly successful. Mr. Buckmaster has forcibly pointed out what is required in the education of working men, and their employers; instead of teaching boys abstractions and metaphysical ideas, as if they were all to be parish ministers, they must be taught things. A knowledge of the laws and properties of matter, by which the earth is subjugated to our use, is the proper education of men who have to work on matter. Several local committees have been appointed to coöperate with the Science and Art Department in promoting scientific instruction in Scotland.

TURKEY.—ROBERT COLLEGE, Constantinople, was founded in 1860, and opened in 1863. It has now become self-sustaining. Its students, now numbering 250, represent nearly all nationalities, but the majority are of Armenian,

Greek and Slavonic races. Girls and women have applied for admission, and the project of admitting them is being agitated. Its President, Rev. Cyrus Hamlin, D.D., is now in this country, to raise funds with which to erect a new building, capable of accommodating at least 250 more students, houses for professors, and to procure an oriental library. He wants in all \$300,000.

JAPAN.—HON. BIRDSEY G. NORTHROP, Secretary of the State Board of Education in Connecticut, has been invited by the representatives of the Japanese Government to go, at an early day, to Japan, and aid in the establishment of a system of popular instruction adapted to that empire. The work will probably occupy him, if he accepts, for a period of years, and will, as we understand it, include such duties as in many governments devolve upon a Minister of Public Education.

There is probably no one in this country better qualified than Mr. Northrop to undertake the task. He has been for many years in Massachusetts and Connecticut an official guardian and promoter of popular education. Intelligent, wise, indefatigable, self-forgotten, prompt, he has shown himself an excellent administrator of business. Enthusiastic, capable of enlisting the aid of all sorts of colleagues, ready in expedients, and of vigorous constitution, he is well fitted to endure the fatigues of an arduous post, and to secure the coöperation of all sorts of men. He has just come home from a tour of educational inquiry in England and on the Continent, which is an admirable preparation for the duties to which he is now called. We do not know whether he will accept the invitation ; but we hope for the sake of Japan, and for the sake of universal education, that he will not decline it, except for the most imperative considerations.

It is very interesting to watch the progress of Japan in its study of and intercourse with the nations of the West. The minister of that country, now resident in Washington, Mr. Mori, is a man of English education, greatly interested in the progress of knowledge, earnest, and desirous of promoting the advancement of his country in all good things. By his intercourse with our official representatives, and by

his visits to different parts of the country, he has gained the confidence and esteem of many Americans. The young Japanese who are studying in Brooklyn, New Brunswick, New Haven, Monson, Norwich, and elsewhere, have acquitted themselves for the most part with exemplary diligence and success. One enthusiastic teacher writes us that if all the Japanese are like his scholars, he should like to move his school to Japan. The embassy now on its way, outranking the resident representative, is a special mark of progress and inquiry. The head of it, as we are told, is one of the highest officers of the government,—being one of two men who share the honors which among western nations pertain to the Prime Minister. Four officers of lower rank, and a considerable retinue, attend him. The object of the embassy, it is supposed, is to bring an officer of high rank and prolonged experience, directly into contact with the governments of Christian nations. An adopted brother of the Mikado is now receiving instruction in an American school. Already one of the heads of departments in Washington, Gen. Capron, recently U. S. Commissioner of Agriculture, has been called to Japan to aid in the development of the material resources. Now latest, but we presume not last, of these indications of progress, comes this important summons to Secretary Northrop.—*Christian Union*.

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### CURRENT PUBLICATIONS.

IF we failed to notice CATHCART'S YOUTH'S SPEAKER<sup>1</sup> in our last issue, we have now the opportunity of saluting it as an assured success, rather than as a candidate for popular favor.

This appreciation is well merited, for it seems as though both publishers and author had conspired to make a gem of a book. In mechanical execution—in the details of paper and print and binding—the Speaker realizes all that is con-

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<sup>1</sup> Selections in Prose, Poetry and Dialogues, for Dec'amation and Recitation. By G. R. CATHCART. New York: Ivison, Blakeman & Co.

veyed by the word *daintiness*,—and we do not know that there is any other word which just conveys the impression produced by this charming compilation.

And, as to the work of redaction itself, though it may seem a slight matter to put together a selection of pieces for exhibition-day, it is in fact no easy task, as they best know who have endeavored painfully to winnow from out the chaff of our ordinary speakers material just suited to the declamatory capacity of the younger class of scholars. Mr. Cathcart manifestly possesses that rarest gift, a seeing eye, and has been able—we know not whether by experience or by divination—to discern just the style of piece which a youngster can utter with naturalness and spirit, and this for the very sufficient reason that the pieces are precisely of the kind which come into *rapport* with the youthful intellect and imagination.

In his modest preface the author states that “a boy will memorize more easily, and speak more naturally and forcibly a richly colored descriptive or didactic passage than an exercise of simple puerile construction.” Nothing could be more just than this observation. Our Readers are entirely too much on the dead prosaic level. That which the young appreciate most vividly and intensely is eloquence,—and that which they love most they certainly will repeat best.

We deem, therefore, that Mr. Cathcart has shown not only nice tact and taste in his selection, but a knowledge of human nature (that is *youthful* human nature) rare in book-compilers. And hence we predict for the Speaker a continuation of its deserved success in even more abundant measure.

MR. J. H. ZELIE, Superintendent of Schools, Kingston, N. Y., has taken a step in the right direction in preparing “The Critical Speller.” It is a collection of useful words which are most frequently misspelled. Words which the pupil will never be likely to have occasion to use, and all words so simple that he can scarcely misspell them if he tries, are omitted. This little book will tend to save valuable time for pupils, and hence its proper use should be encouraged.

We understand that Mr. T. W. T. CURTIS, Principal of the New Haven High School, has prepared a similar work, though more extended. New departures of this sort, to shorten the course of the student, by opening "short-cut roads" up the hill, will be approved by all concerned.

HAGAR'S MATHEMATICAL SERIES\* sets out with, I "Primary Lessons in Numbers;" II "Elementary Arithmetic;" III "Common School Arithmetic." They are very tastefully illustrated, and introduce the object teaching method in a sensible and natural manner. Both authors' and Publishers' part disclose the work of master hands. In fact, they are the best looking arithmetics that we have seen.

DR. JOHN S. HART'S "Manual of English Literature" is just published, in the usual good style of Messrs. Eldredge & Brother.

MR. J. R. SYPHER has prepared a book entitled, "The Art of Teaching School." Its secondary objects are pretty fully set forth in its title page: "A manual of suggestions for the use of teachers and school authorities, superintendents, controllers, directors, trustees and patrons of public schools and higher institutions of learning. How to establish, organize, govern and teach schools of all grades, and what to teach." Why he fails to mention in this list, "school visitors and school commissioners," we do not know. If it is adapted to those enumerated, it must be good for them too. It is published by Messrs. J. M. Stoddart & Co.

MESSRS. G. T. PUTNAM & SONS have published a little volume in paper binding, called "The Best Reading." It gives hints on the selection of books, on the formation of libraries, on courses of reading, etc. It contains a classified bibliography for easy reference.

MESSRS. C. C. CHATFIELD & Co., have just issued "Logical Praxis," comprising a summary of the principles of logical science and copious exercises for practical application, by HENRY N. DAY.

Also, "Holy Land," with Glimpses of Europe and Egypt,

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\* Cowperthwait & Company, Publishers.



a year's tour, by S. D. PHELPS, author of "Poems for the Heart and Home."

MESSRS. HARPER & BROTHERS have published "Notes on the Corinthians, by ALBERT BARNES;" "Around the World," being sketches of travel through many lands and over many seas, by E. D. G. PRIME, with illustrations; "Twenty Years Ago, a book for girls," by the author of "John Halifax, Gentleman;" "Poor Miss Finch," a novel by WILKIE COLLINS; and "Oliver Twist," of the Household Edition of the works of CHARLES DICKENS—illustrated in their excellent style.

"The JOURNAL OF EDUCATION for the Province of Nova Scotia," for the month of February, is very good. It is made up from the columns of the AMERICAN EDUCATIONAL MONTHLY, and, strangely enough, the "credit" is neglected. To say the least, that seems pretty "cool," even for that latitude.

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*MISCELLANEA.*

JOHN S. HART, LL.D., author of several popular School Books, and late Principal of the New Jersey State Normal School, has accepted a Professorship in the College of New Jersey.

PROF. GEORGE F. COMFORT, author of a popular German Series, has accepted the Professorship of Modern Languages and *Æsthetics* in Syracuse University, N. Y.

PROFESSOR CHARLES A. LEE died at Peekskill, N. Y., in February, aged seventy-two years.

MR. E. ARMITAGE, a distinguished English artist, is at work upon an allegorical painting, exemplifying the burning of Chicago, and the sympathy and generosity of England, which was called forth by the calamity. The painting is to be presented to the city of Chicago by English artists. Its size is to be, without frame, 12 feet long by 9 feet high. It is to be finished by August or September next.

WHEN the Grand Duke Alexis passed Godfrey, Ill., the young ladies of Monticello Seminary assembled at the station, waved their handkerchiefs in welcome, and sang in full chorus "My Country, 'tis of Thee, Sweet Land of Liberty." The Duke gracefully bowed his appreciation, and smiled his thanks and adieux.

The next Morning Miss Haskell, the Principal, received the following note: "Touched by the attention and delighted with the beautiful singing of the young ladies of your establishment, I beg to express my hearty thanks.

"ALEXIS."

This note, in the hand-writing of the Duke, will be fondly preserved in the Seminary cabinet.

HOSPITAL FOR FOOLS.—Some one writes that in Amsterdam there used to be a hospital for fools; but there was so much contention as to who should occupy it—so many ought to, and so few were willing to go there,—that the charitable enterprise was finally abandoned.

## PUBLISHERS' DEPARTMENT.

**Sheldon & Company** have just issued some very important text-books. First, several of the higher books of the "Standard Mathematical Series." This important series is being completed by Prof. Olney, of Michigan University: the "Complete School Algebra," the "Elementary Geometry and Trigonometry" and the "General Geometry and Calculus" have been published, and have already been very successful. Although prepared by a Western Author, the "Calculus" was at once adopted in Harvard College, Yale and Brown University and many other of our best institutions. Prof. Olney has been very successful in making the most difficult part of mathematics clear to the comprehension of ordinary students. S. & Co. have also issued "Colton's New Series of Geographies." The distinguishing features of these books are: 1st. They contain all which the scholar should be required to learn, and nothing more. The too common practice of crowding School Geographies with all sorts of collateral matter, suited only for books of reference, has been carefully avoided. 2d. The clearness and beauty of the maps. The Capitals are all distinguished by a peculiar style of type, as are the places next in importance by another special style of type. The Maps contain only the places which are questioned upon in the text, and they are so clearly represented that they can be found at a glance. 3d. The whole subject of Geography, as taught in common schools, is embraced in two books.

**Alliteration.**—The New Haven *Daily News*, on receiving a copy of the Yale Naught-ical Almanac, thus alliterates:

"THE YALE NAUGHT-ICAL ALMANAC FOR 1872: C. C. Chaifield & Co., New Haven. As Candid Critics we Cannot Conceal our Compliments and Congratulations to C. C. C. & Co., and the Commonwealth of Connecticut, on the Completion of this Commendable Contribution to the Catalogue of Contemporaneous Comicalities. The Contents consist of Cuts, Crack brained and Captivating Corruptions of Comical Concepts; a Calendar with Concise, Correct, Complete and Careful Calculations by Competent Collegians, a Conglomerated Collection of Curious Circumstances, Consequences and Contingencies; Collectively made Comely with Captivating Cuts of Cunning Conception, comprising Causticizing Caricatures on College Celebrities, that Carry Convulsing Conviction of Conspicuous Correctness. Cheap for 35 Cents."

**Teachers desiring a copy of The Nation** (shortly to be published) containing reviews of late School Books, will please send their names to the Publishers, No. 5 Beekman St. Inclose 10 cents. THE NATION, 5 Beekman St., New York.

THE NATION is one of the ablest journals published in the English language.—*London Saturday Review*, of Dec. 20, 1871.

THE NATION—A Weekly Journal of Literature, Science and Art. \$5 per an.

## SCHOOL STATIONERY.

# Papers—Note, Letter, Cap, Manuscript, Initial, AND STATIONERY CASES.

The following are white wove, ruled, superfine, highly finished. They are neatly put up in manilla outside wrappers, with the numbers and weights marked on each package. The note and letter papers are in quarter-ream packages, and the cap papers in half-ream packages.

|                                                     |                 |               |
|-----------------------------------------------------|-----------------|---------------|
| Octavo Note—3 $\frac{1}{2}$ pounds to the ream..... | price per ream, | <b>\$1.25</b> |
| “ 4 “ “ “ .....                                     | “ “             | <b>1.40</b>   |
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| Letter Paper—8 pounds to the ream.....              | “ “             | <b>2.80</b>   |
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| Foolscap—10 pounds to the ream.....                 | “ “             | <b>3.50</b>   |
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| Broad Bill Cap—10 pounds to the ream.....           | “ “             | <b>4.00</b>   |
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| “ 14 “ “ “ .....                                    | “ “             | <b>5.60</b>   |
| Legal Cap—10 pounds to the ream.....                | “ “             | <b>4.00</b>   |
| “ 12 “ “ “ .....                                    | “ “             | <b>4.80</b>   |
| “ 14 “ “ “ .....                                    | “ “             | <b>5.60</b>   |

## Manuscript Papers.

A carefully prepared set of rules for properly preparing manuscript for the press accompanies Nos. 2 and 3.

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------|
| No. 1.—Students' Manuscript, size 3 $\frac{3}{4}$ x 8 inches, flat sheets for pencil, with three perforations at top for affixing to the eyeletted case—ruled on one side ..... | per ream | <b>\$1.00</b> |
| No. 2.—Editors' Manuscript, size 5 x 10 inches, flat sheet, with three perforations at top of sheet for tying them together in parts or chapters .....                          | per ream | <b>1.20</b>   |
| No. 3.—Contributors' Manuscript, like No. 2, somewhat thicker.....                                                                                                              | “        | <b>1.80</b>   |
| No. 4.—Authors' Manuscript, size 6 x 10 inches, flat sheet, otherwise like No. 3....                                                                                            | “        | <b>2.25</b>   |

## Initial Stationery.

This is very handsomely put up in paper boxes, containing one quire ladies' note, with envelopes to match.

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|-----------------------------------------------------------------------------------|----------|------------|
| No. 1.—Everett, white wove.....                                                   | per box, | <b>.25</b> |
| No. 2.—Siddons, rose tint, ornamented box, perfumed.....                          | “        | <b>.30</b> |
| No. 3.—Oriental, auburn tint, hinged neck box, ornamented with colored plates...  | “        | <b>.60</b> |
| No. 4.—Offered and Accepted, lavender tint, ornamented with large colored plates, | “        | <b>.45</b> |
| No. 5.—Galaxy, white wove, ornamented box.....                                    | “        | <b>.30</b> |

This initial stationery will be mailed for 10 cents extra for postage.

## Stationery Cases.

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|---------------------------------------------------------------------------------------------------|-------|-------------|
| No. 1.—With three apartments; for letter paper, note paper, and envelopes.....                    | each, | <b>1.56</b> |
| No. 2.—With four apartments, and drawer for containing stamps, etc.....                           | “     | <b>2.50</b> |
| No. 3.—With three apartments, and small trays for holding pins, stamps, wafers, pencils, etc..... | “     | <b>2.70</b> |

## SCHOOL STATIONERY.

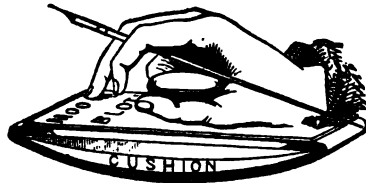
### Our School Rulers.

These Rulers are made specially for school purposes. They are well made of good, hard wood, polished. They are accurately marked in inches, half-inches, quarter-inches, and eighth-inches, stamped in black. One edge is properly bevelled. There are two sizes—one twelve inches long, and the other fifteen inches. The latter is recommended as most useful.

Price, each..... **\$0.10**

(Specimen mailed, letter postage, 20 cents.)

Liberal discount on a gross.



### Moore's Cushioned Blotters.

|                                      |                        |
|--------------------------------------|------------------------|
| Walnut, small, plain.....            | each, <b>\$0.50</b>    |
| Cedar, " ".....                      | " <b>.60</b>           |
| Rosewood, polished.....              | " <b>.85</b>           |
| Paper, small, for each of above..... | per packet, <b>.10</b> |
| Walnut, large, plain.....            | each, <b>.75</b>       |
| Rosewood, large, polished.....       | " <b>1.25</b>          |
| Paper, large.....                    | per packet, <b>.10</b> |

### Blotting Paper.

|                                                                       |                                  |
|-----------------------------------------------------------------------|----------------------------------|
| Parker's Treasury, 80, 100, 120 pounds to ream, white or colored..... | per quire, <b>1.20 to \$2.25</b> |
| Blotting Pads (12 pieces in packet).....                              | per packet, <b>.10</b>           |

### Erasers.

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|--------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Green's Patent Ink Erasers.....                                                                                    | price per 100 pieces, <b>\$5.00</b> |
| Erasing Knives.—Joseph Rodgers & Sons' wood handle, bone handle, ivory handle, imported. Price variable with gold. |                                     |

### Penholders.

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| Accommodation, steel tips.....              | per gross, <b>\$0.60</b> |
| Double Conic, Cedar, small, steel tips..... | " <b>2.20</b>            |
| " " " medium, steel tips.....               | " <b>2.67</b>            |
| " " " large, " ".....                       | " <b>3.00</b>            |

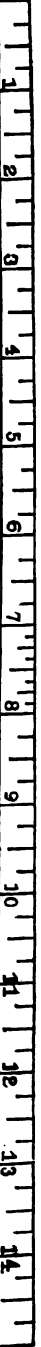
Pen Racks of varied styles, prices each, 20 to 60 cents.

**J. W. Schermerhorn & Co.,**

Manufacturers of School Material,

14 Bond St. New York

J. W. SCHERMERHORN & CO.  
NEW YORK.



# Lead Pencils, Pencil Files, Holders, etc.

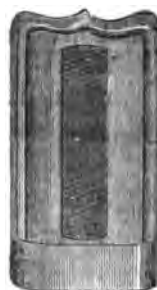
## LEAD PENCILS, FABER'S.—All Grades.

Imported—prices variable with gold.

- 4 Grades.—Nos. 1, 2, 3, and 4, in paper box.
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Any grade in dozen or gross packages.

**Eagle Pencils.**—Nos. 1, 2, 3, and 4, and varied styles, in boxes.



**Pencil File, with Dust Box.**—Squires' Patent, for Lead and Slate Pencils. Price, 25 cents.

## The New Slate Pencil and Pen-Holder

Is a new device, large enough to receive the regular slate pencils which are sold everywhere. It is long enough for a regular four inch slate pencil—the six inch may be broken in two. Every teacher knows how desirable it is to have the children use a regular handle or holder when they write with slate pencil or pen. The irregular bits of slate pencils cramp the fingers, and injure them for writing.

The cut illustrates it somewhat larger than regular size.

They are put up in paper boxes, 100 in each box. Price, 5.00

Specimen sent by mail for 10 cents.

## Propelling Pencils.

|                                                    |      |
|----------------------------------------------------|------|
| Red Wood, with German silver slide, - - per dozen, | 1.75 |
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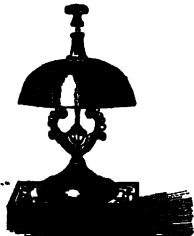
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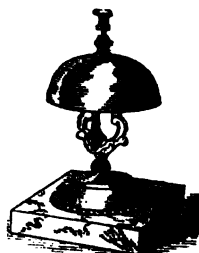
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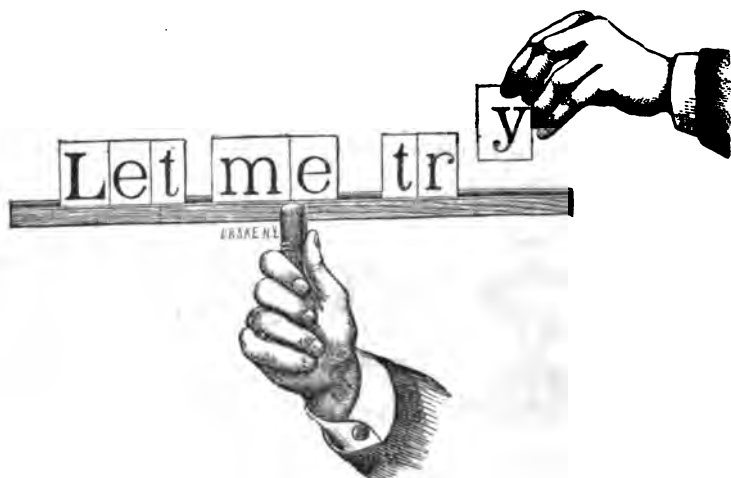
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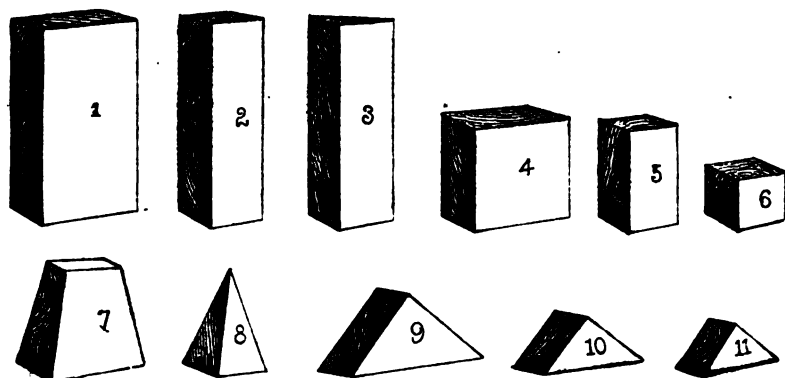
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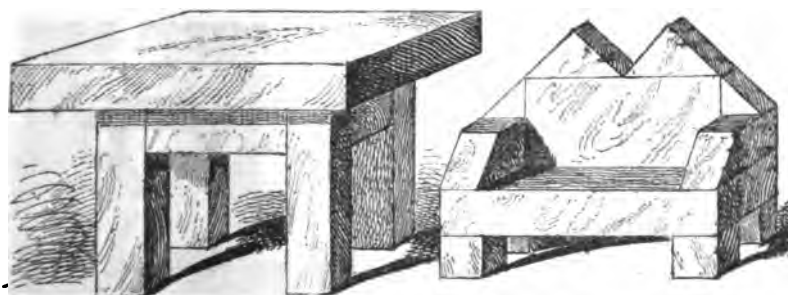
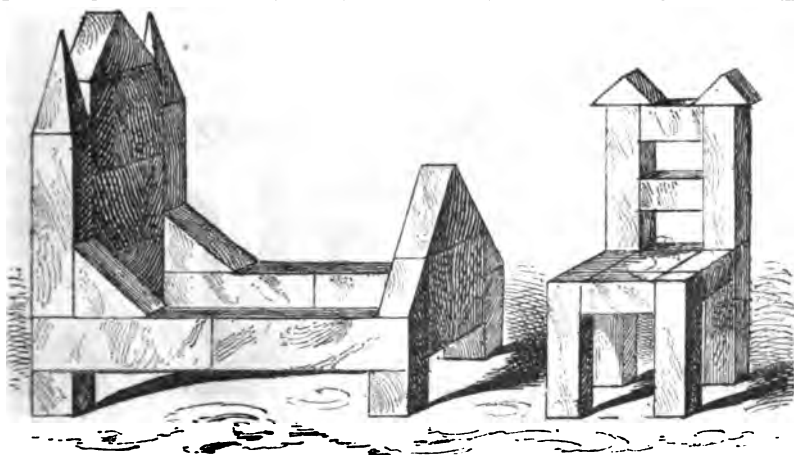
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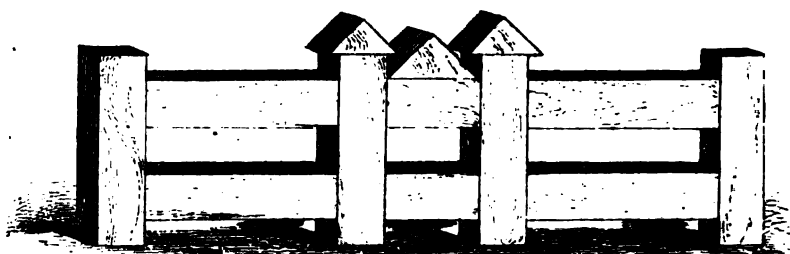
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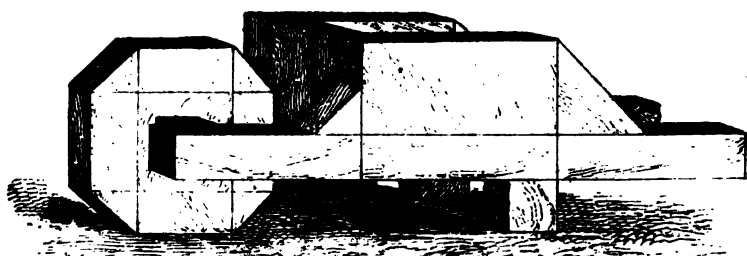
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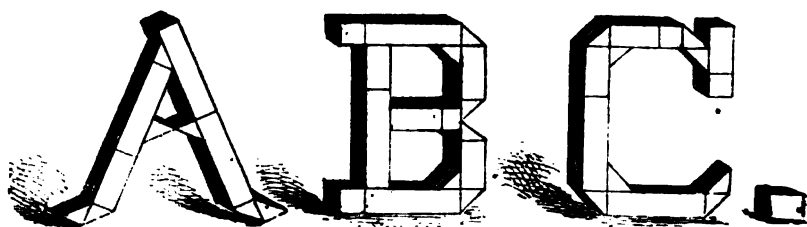
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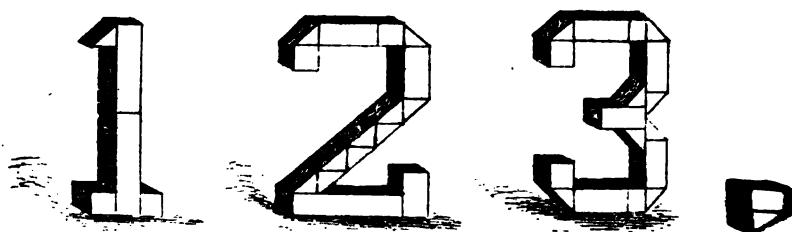
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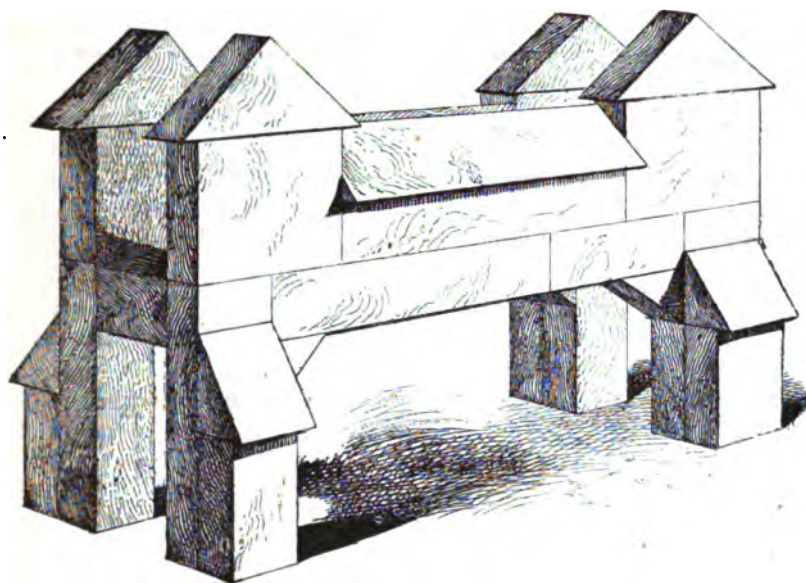
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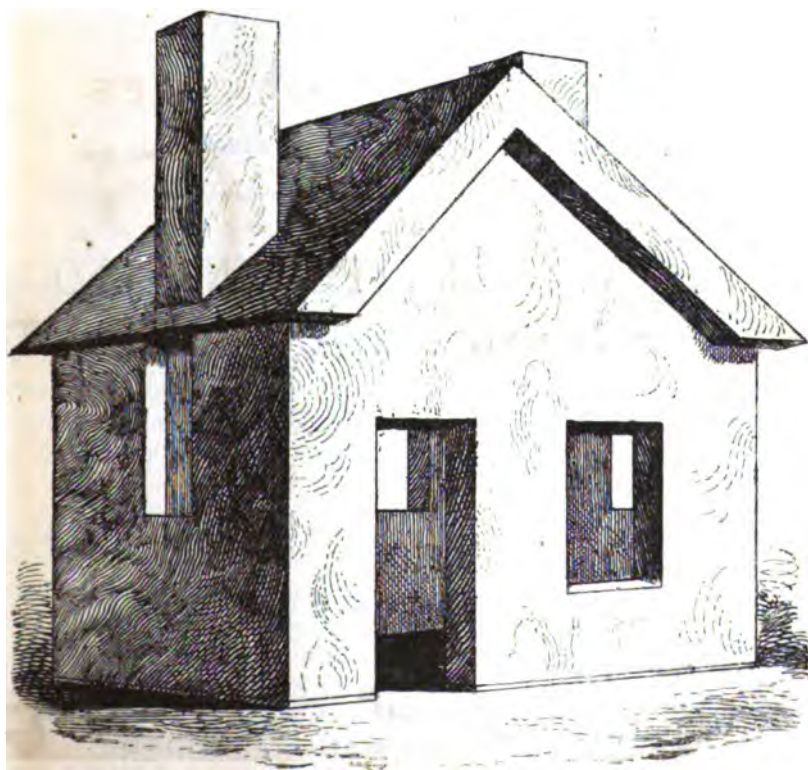
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The List includes RELIABLE CANDIDATES for EVERY DEPARTMENT OF INSTRUCTION, and for every grade of School, from the District School to the University.

All who expect to want Teachers for the AUTUMN SESSION, will do well to begin early correspondence with the "AMERICAN SCHOOL INSTITUTE."

*The evils of procrastination are no where more clearly marked than in engaging Teachers.*

See "ORDER FORM" on next page.

### **Address:**

J. W. Schermerhorn, *Actuary,*  
"American School Institute,"

(P. O. Box 3,445.)

14 Bond St., New York.

Western Branch:—39 W. 4th St., Cincinnati, O.

Principals, School Officers, and Heads of Families, who seek Teachers, should fill "Form of Order," and send it to N. Y. Office of "Amer. School Inst."

# "American School Institute," founded 1855,

IS A RELIABLE EDUCATIONAL BUREAU:

- |                                                  |                                                   |
|--------------------------------------------------|---------------------------------------------------|
| 1. To aid all who seek well-qualified Teachers : | 3. To give Parents Information of Schools :       |
| 2. To represent Teachers who desire positions :  | 4. To sell, rent, and exchange School Properties. |
- J. W. SCHERMERHORN, A.M., Actuary, 14 Bond Street (near Broadway), New York.  
 WESTERN BRANCH, 39 W. Fourth St., Cincinnati, O.—W. S. STEVENSON, A.M., Manager.  
 NEW ENGLAND BRANCH, Boston—G. S. WOODMAN, A. M., Manager.

## "The Right Teacher for the Right Place."

INFORMATION OF TEACHERS is given, embracing—Opportunities for education; special qualifications; experience, and in what schools; references; age; religious preferences; salary expected; candidate's letter, and sometimes a photographic likeness. We nominate several candidates, giving opportunity for selection. Seventeen years trial proves the *American School Institute* useful and efficient. Its patrons and friends among the first educational and business men.

TERMS: *Two Dollars on giving order for Teacher.* When Teacher is accepted, *Three Dollars additional.* Extra expense incurred in selecting and examining a rare Teacher, will be charged. *No charge to Public Schools.*

Principals, School Officers, and others, should give early notice of what Teachers they may want.

## Form of Order for Teacher.

- (1) Full name and full post-office address of the person who wants the Teacher.....
- (2) Do you want a Male or Female Teacher?.....  
Married or Unmarried?.....
- (3) What branches must be taught?.....
- (4) When must the Teacher begin?.....
- (5) What salary will you pay? Will you furnish Board? Do you pay traveling expenses?.....
- (6) Do you prefer the Teacher to be a Church member? Of what Church?.....
- (7) Remarks.....

Too full particulars cannot be given.)

Those applying first time should name References (in New York, if possible.)

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## TEACHERS' BULLETIN.

Teachers who wish positions should have "Application Form." This Bulletin is sent to the leading Principals and School Officers everywhere, hence representation here is efficient.

**Abbreviations Explained :** Number of paragraph refers to Candidate's application on file; Name of School or College signifies that Candidate has graduated at Institution named. If "Ed." precedes name of School, Candidate has attended there, not graduated. Figure following denotes number of years experience. Branches taught are abbreviated naturally. Foreign languages spoken by Candidate are in *Italics*. Church membership is shown; B. for Baptist; Cl. Congregational; C., Roman Catholic; E., Episcopal; L., Lutheran; M., Methodist; P., Presbyterian. "Home," as "\$800 and Home," means \$800 Cash Salary, and Board, Washing, Fuel and Lights.

### Ladies—English, French, Drawing, etc.

50—Ed. Geneva; 13; Eng., Maths., and French; E.; \$400 and home.

51—Rutgers; 7; Eng., and Maths.; P.; \$300.

52—Kimball Union Academy; 5; Eng., Maths., Latin, French, Drawing and Painting.

53—Wilton Acad.; 4; Eng. and Maths.; \$500.

54—Boston; Eng., Maths., French and German; P.

55—Ed. Acad.; 7; Eng. and French; E.; \$500.

56—Rutgers; 20; Hr. Eng. and Maths.; P.; \$700.

57—Convent Sacred Heart; Eng., Maths. and French; \$400.

58—Roxbury High Sch.; 4; Eng., Maths., Latin, Maths., Latin, French and German; \$500.

59—Brookport Nor. Sch.; 4; Eng., Maths., Nat. Sciences, French and German; \$600.

60—Ed. Troy Sem.; 1; Eng., Maths. and French; E.

61—Ed. Tutor; Eng., Classics and Maths.

62—Kingston Acad. and N. Y. Nor. Sch.; 10; Eng., Maths., Book-keeping, Drawing and Object Teaching; P.; \$600.

63—N. Y. Nor. Sch.; 2; Eng. and Maths.; \$600.

64—Bates Coll.; 6; Greek, Latin, Eng. Literature, Maths., Eng., French and German; \$900.

65—Genesee Sem.; 2; Eng., Maths., Latin, French, Drawing, Callisthenics and Object Teaching; B.; \$600.

66—East Me. Conf. Sem.; 5; Eng., Maths., Object Teaching and Gymnastics; Cl.; \$600.

67—Ed. N. E.; Maths., French, German and Eng.; \$300 and home.

68—Con. Lit. Inst.; 2; Eng., Maths., Latin and French; \$500.

69—Boston; 4; Eng., Maths., Latin, B'k-keeping and Object Teaching; Cl.; \$600.

70—Ed. Darien Sem.; Eng., Maths. and Gymnastics; Cl.; \$500.

71—Poughkeepsie Fem. Acad.; 6; Hr. Eng., Maths., French and Singing; Ref.; \$600.

72—Ed. High Sch.; 6; Eng., Latin, Maths., French, German, Singing and Object Teaching; P.; \$500.

73—Tilden Sem.; 2; Eng., Latin and French; E.

74—Ed. Conn. Wes. Sem.; 1; Botany, History, Maths., Eng. and El. Latin; Cl.; \$500.

75—New Hampton Lit. Inst.; 8; Eng., Maths. and French; B.; \$800.

76—Tracy Sem. and Oswego Nor. Sch.; Eng., Mathematics and Object Teaching; P.

77—Brookport Nor. Sch.; 3; Eng. and Maths.; P.; \$600.

78—Sidney H. Sch.; 13; Nat. Sciences, Maths., Latin and French; M.; \$1000.

79—Rutgers; 15; English Literature, History, Philosophy, Logic, Composition and Geology; P.; \$500 and home.

80—Ed. Oak Hill Sem.; Eng., Latin and Maths.; Cl.; \$400.

81—Mt. Holyoke; 5; Eng., Maths.; Latin, French and Painting; M.

82—Ed. Antioch Coll.; 2; Greek, Latin, Maths., French, German and Spanish; Friend; \$1000.

83—Wells Sem.; Latin, French, Metaphysics, Eng., German; P.

84—Utica Sem.; 9; Hr. Eng., Literature, Maths., French, German, Piano, Thorough Bass, Drawing and Painting; \$800 and home.

85—High Sch. and Mt. Holyoke; 6; Eng., Maths., El. French and Gymnastics; Cl.; \$700.

86—Oneida Conf. Sem.; 5; Eng., Maths., Latin, Greek, French, German and Gymnastics; M.; \$700.

87—Ipswich Sem.; 6; Eng., Maths., Latin and Drawing; Cl.; \$400 and home.

88—Troy Sem.; 1; Eng., Maths., French, Drawing and Painting; Cl.; \$250 and home.

89—Oberlin; 5; Maths., Classics, Hr. Eng., French, Gymnastics and Object Teaching; P.; \$1000.

### Ladies—Music, etc.

158—Ed. N. Y. Prof.; 10; Vocal Music; P.; \$700 and home.

159—St. Mary's Hall; Eng., Maths., Piano and Drawing; E.

160—Union Hall Sem.; 1; Eng., Maths., Latin and Piano; Ref.

161—Glens Falls; 6; Piano, Thorough Bass, Drawing, Painting, Eng. and Maths.; E.; \$300 and home.

162—Nazareth, Ky.; Eng., French, Piano, Organ, Guitar and Singing; E.; \$600.

163—Notre Dame Acad., Cal.; 2; Eng., Maths., Piano, Singing and Drawing; E.; \$700.  
 164—Ed. Dublin; 3; Eng., Maths., French, Drawing, Painting and Object Teaching; R. C.; \$400.  
 165—Ed. England; 10; Eng., Maths., B'k-keeping, French and Piano; E.; \$500 and home.  
 166—Brooke Hall Sem. and N. E. Conservatory; Piano, Organ and Singing; Cl.; \$400 and home.  
 167—Miss Bates' Sem., S. C.; 4; Eng. and E. L. Piano.  
 168—Genesee Musical Inst.; Piano, Organ and Singing; \$300 and home.  
 169—Le Vert Coll., Ga.; 1; Eng., French, Piano, Singing, Gymnastics and Object Teaching; R. C.; \$300 and home.  
 170—Castleton Sem. and Boston; 7; Eng., Maths., Piano, Singing and Gymnastics; Cl.; \$350 and home.  
 171—High Sch.; 5; Eng., Maths., French, Piano, Drawing and Object Teaching; B.; \$600.  
 172—Ed. Savannah Conservatory; 6; Piano, Organ, Guitar and Singing; E.; \$600 and home.  
 173—Ed. Tutors; 14; Piano, Organ, Singing and Nat. Sciences; E.; \$600 and home.  
 174—Ed. Sem. and Normal; 19; Eng., French and Music; Cl.  
 175—Tilden Sem.; 9; Piano and Singing; P.; \$400 and home.  
 176—New York Normal; 1; Eng., Maths., Gymnastics, Object Teaching, Singing and El. Piano; E.; \$200 and home.  
 177—Ed. Excelsior Normal; Piano, Organ, Thorough Base, Singing and Painting.  
 178—Ulster Sem.; Eng., Maths., Latin, Piano, Guitar, Organ and Harmony; M.  
 179—St. Mary's Hall; Eng., French, Latin and El. Piano; E.; \$250.  
 180—Jersey City Normal; 18; Mental and Moral Philosophy, Rhetoric, Composition, Latin, Piano, Singing and Gymnastics; Ref.; \$500 and home.  
 181—Ed. England; 14; Eng., French, Piano and Drawing; E.; \$400 and home.  
 182—3; Eng., Maths., French.  
 183—Paris; 1; Eng., French, Piano and Drawing; C.; \$300.  
 184—Ed. Profs.; 6; Piano, Singing, Organ, Eng., French and Drawing.  
 185—Ky. Coll.; Eng., Maths. and Piano; \$250 and home.  
 186—Tilden Sem.; Eng. and Piano; P.  
 187—7; Eng., Maths., French and Piano.  
 188—Ed. Governors; 5; Piano, Organ and Singing.  
 189—Syracuse Conservatory; Piano, Organ and Singing; \$800.  
 190—Providence H. Sch.; 4; Piano, History and Eng. Lit.; Cl.; \$300 and home.  
 191—Ed. Middlebury Sem.; 10; Piano, Organ and Singing; Cl.; \$600.  
 192—Mass. Normal; 18; Eng., Elocution, French, Piano and Singing; Cl.; \$800 and home.  
 193—Prof. Wolsohn; 9; Piano and Singing; B.; \$400 and home.  
 194—Sem.; 4; Piano, Drawing and Painting; P.; \$400 and home.  
 195—Ed. Signor Erani; 3; Vocal Music; \$1,000 and home.  
 196—Rye Sem.; Eng., Maths., Piano, Singing, Gymnastics, Object Teaching, El. French and German; E.; \$300 and home.  
 197—Mansfield Coll.; 3; Eng., Maths., Latin, French and Piano; M.; \$500 and home.  
 198—Ed. Europe; 6; French, German, Piano, Organ and Drawing; E.  
 199—Cambridge H. School; English, Maths. and Piano; Cl.  
 200—Troy Sem.; 6; Eng., Maths., French, Piano, Organ, El. Latin and German, Gymnastics; M.  
 201—Utica Acad.; 1; Piano, Organ, Maths. and French; E.  
 202—Profs.; Vocal Music and Piano; E.  
 203—Profs.; 10; Piano and Organ; E.; \$500 and home.

#### Ladies—Drawing, Painting, etc.

514—Ed. France and Italy; 10; Drawing, Painting, French and Italian.  
 515—Ed. Riverdale; 1; Drawing, Painting, French and Piano; E.

516—Cooper Inst.; 1; Drawing, Painting and Gymnastics; Cl.; \$400.  
 517—Ed. Genesee Wes. Sem.; Drawing, Painting and Eng.; M.; \$300 and home.  
 518—8; Drawing, Painting and Eng.; P.; \$250 and home.  
 519—Excelsior Normal; Drawing, Painting, Eng. and El. Music.  
 520—Ed. Brooklyn; Piano, Drawing, Painting and Eng.; E.  
 521—Troy Sem. and Cooper Inst.; 4; Drawing, Painting and French; E.; \$400 and home.  
 522—School of Design; Drawing and Painting; E.; \$250 and home.  
 523—Cooper Inst.; 7; Drawing and Painting; M.; \$600 and home.  
 524—N. C. Wes. Sem.; 2; Drawing and Painting; M.; \$300 and home.  
 525—Glenwood Sem.; 2; Drawing, Painting and Eng.; Cl.; \$300 and home.

#### Foreign Ladies, etc.

314—Hamburg; 3; German, French, Drawing, Painting, Piano, Singing and Eng.; \$400 and home.  
 315—Ed. France and Germany; French, German, Piano and Singing; E.; \$500.  
 316—Ed. Paris; 1; French, German, Italian, Eng., Piano and Drawing.  
 317—Ed. Germany; 7; German, French, Eng., Piano, Singing and Gymnastics.  
 318—Ed. Paris; 7; French; P.  
 319—Ed. Germany; 3; German, Piano and Singing; L.  
 320—Ed. Germany; 1; German, Piano and Drawing.  
 321—Ed. Berlin, Leipzig Conservatory and Florence; 5; Singing, Piano, French, German, Italian, Eng. and Drawing; \$800 and home.  
 322—Ed. Germany; 3; German, French, Eng., El. Piano and Drawing.  
 323—Ed. Paris and Germany; 10; French, German, Eng., Piano and Drawing; E.  
 324—Ed. Germany; 3; French, German, Eng., Drawing and Object Drawing; Calvinist.  
 325—Ed. France and Germany; 12; Eng., French, German, Piano and Singing; E.; \$800 and home.  
 326—Paris; 2; French; C.  
 327—Vienna; 2; French, German and Piano; L.  
 328—Prussia; 8; German, French, Piano and Drawing; L.; \$400 and home.  
 329—Switzerland; 6; French and German; \$300 and home.  
 330—Italy; 8; French, Italian, Piano, Drawing and Painting.  
 331—Paris; 4; French, Drawing and Painting; \$600.  
 332—Switzerland; 10; French, German, Natural Sciences, Piano, Drawing and Painting.

#### Gentlemen—English, Maths., Classics, French, German, Military Tactics, &c.

72—Dartmouth; 5; Classics and Maths.; Cl.; \$1,500.  
 73—Seton Hall; Eng., Maths., Belles Lettres, Latin, French and German.  
 74—Beaucamps Coll. France; Eng., Maths., and French; C.; \$1,000.  
 75—Harvard; 1; Nat. Sciences, Maths. and French; \$1,500.  
 76—Phillips Acad.; 2; Eng., Maths., Latin, Book-keeping; Cl.; \$1,200.  
 77—High Sch.; 5; Eng., Maths., Latin, Book-keeping and Singing; \$800.  
 78—Union; 10; Eng., Maths., Classics, Book-keeping and Drawing; P.; \$1,200.  
 79—Yale; 3; Eng., Maths., Classics, French and German; Cl.; \$2,000.  
 80—Commercial Coll.; 1; Eng., Maths. and Book-keeping; \$700 and home.  
 81—New York University; 20; Eng., Maths., Latin, Piano, Singing and Gymnastics; P.; \$1,200.  
 82—Amherst; 5; Classics, Maths. and Eng.; Cl.; \$600 and home.  
 83—Bedford Acad.; 6; Eng., Maths., Latin, French, German, Object Teaching and Gymnastics; \$1,200.  
 84—Public Sch.; 2; Eng., Maths., Drawing and Gymnastics; \$1,800.

85—Centre Coll.; Classics, Maths, Book-keeping; \$1,000.  
 86—Yale; Classics, Maths, Eng. Literature, Drawing and Painting; E.; \$1,800.  
 87—Colby University; 25; Maths, Nat. Sciences, Classics, *French, German* and Spanish; Cl.; \$2,000.  
 88—Phillips Acad.; 1; Classics, Maths, Eng. and French; \$800.  
 89—Charlton Acad.; 4; Eng., Maths. and Singing; \$1,000.  
 90—Dartmouth; 3; Eng., Maths., Classics, French and Gymnastics; E.; \$1,000.  
 91—Lafayette Coll.; 5; Eng., Maths., Classics, Book-keeping, German, Piano, Singing, Drawing, Gymnastics and Object Teaching; E.; \$1,000.  
 92—Middlebury Coll.; 3; Nat. Sciences, Maths., Classics and Singing; M.; \$800 and home.  
 93—Trinity Coll.; 5; Classics, Maths. and Eng.  
 94—Union; 15; Classics, Eng., Maths. and Singing; E.  
 95—Williams; 2; Classics, Maths., Nat. Sciences and Physiology; Cl.; \$2,000.  
 96—N. Y. Normal; 9; Eng., Maths. and Book-keeping; \$1,800.  
 97—Pub. Sch.; 20; Eng., Maths., Book-keeping and Singing; \$1,200.  
 98—Genesee Coll.; 3; Maths., Nat. Sciences, Book-keeping, French and German; M.  
 99—Hamilton; 2; Eng., Elocution, Composition, Classics, Maths., French and German; P.; \$1,100.  
 100—Cornell; 2; Eng., Maths., French, German and El. Latin; P.; \$1,200.  
 101—N. Y. Conf. Sem. and Eastman's Com. Coll.; 12; Eng., Nat. Sciences, Maths., Book-keeping and El. Classics; M.; \$800.  
 102—Queen's University; 5; Eng., Maths., Drawing and Painting; E.; \$550 and home.  
 103—Ed. N. Y. Conf. Sem.; 12; Eng., Maths., Latin and Book-keeping; B.; \$900.  
 104—Williams, Union Theological Sem. and 2 yrs. in Berlin; 5; Modern Langs. and Classics; Cl.  
 105—N. Y. Normal; 20; Eng., Maths., Classics and Singing; E.  
 106—Pa. Normal; 3; Eng., Maths., Latin, Book-keeping, German, Drawing, Gymnastics and Object Teaching; P.; \$600 and home.  
 107—Normal; 1; Sciences, Maths., Latin, German, Drawing and Gymnastics; B.; \$800.  
 108—Union; 3; Eng., Maths., Classics and German; \$1,200.  
 109—Bowdoin; 10; Eng., Maths., Classics, Book-keeping, German, French and Singing; Cl.; \$2,000.  
 110—West Point; 10; Maths., Nat. Sciences, Eng., French, Mil. Drill and Drawing; E.; \$700 and home.  
 111—21; Maths., Belles Lettres, Nat. Sciences, Classics, Book-keep. and Object Teaching; M.; \$1,200.  
 112—Union; 15; Classics, Maths., Nat. Sciences, Book-keeping, German and Singing; M.; \$1,500.  
 113—Rochester Univ. and Theological Sem.; 15; Maths., Nat. Sciences, Classics and Eng.; B.; \$2,000.  
 114—Hamilton; 2; Eng., Maths., Drawing and El. Classics; \$600 and home.  
 115—Dartmouth; 8; Eng., Classics, Maths., Book-keeping, German, French and Singing; P.  
 116—Wesleyan Univ.; 1; Eng., Maths., Classics, German, Drawing, Painting and Gymnastics; \$1,000.  
 117—Bowdoin Coll. and Berlin University; Eng., *German*, Classics and French.  
 118—Harvard; 3; Classics, Maths., Eng., French and German; Cl.  
 119—Ed. Va. University; 4; Classics, Maths., Nat. Sciences, Hr. Eng., French, German, Singing, Drawing, Gymnastics and Object Teaching; B.  
 120—Williams; 10; Classics, Maths., Nat. Sciences, Book-keeping and Eng.; P.; \$1,200.  
 121—Wesleyan Univ.; 2; Eng., Maths., Classics, French and German; M.; \$750.  
 122—Ed. Dartmouth; 5; Eng., Maths., Classics, French, *German*, Spanish, Singing, Drawing and Gymnastics; Cl.; \$800.  
 123—Ed. Waterville Coll.; 17; Eng., Maths., Book-keeping, Classics, Gymnastics, Object Teaching and El. French and German; P.  
 124—Dartmouth; 3; Eng., Maths., Classics, Elocution, Gymnastics and Object Teaching; Cl.; \$2,500.  
 125—Dartmouth; 3; Eng., Maths., Classics, Book-

keeping, French, German, Singing and Gymnastics; Cl.; \$1,200.  
 126—Cornell; 1; Eng., Maths., Latin, Book-keeping, French and German; P.; \$800.  
 127—Vt. University; 6; Eng., Maths., Classics, Piano, Organ and Object Teaching; P.; \$1,200.  
 128—Mich. Univ.; 4; Eng., Maths., French and Drawing; \$1,500.  
 129—Williams; 5; Eng., Maths., Classics, Elocution, Book-keeping, Gymnastics and Object Teaching; R.; \$1,000.  
 130—Ed. N. E.; 14; Eng., Classics, Elocution, Maths., *German*, French, Piano, Organ, Singing, Gymnastics and Object Teaching; \$1,200.  
 131—Amherst; Eng., Maths., Nat. Sciences, Classics, French, German and Gymnastics; \$800.  
 132—Ed. N. E.; 2; Eng., Maths., and Latin; U.; \$800.  
 133—Mount Retirement Sem.; 8; Eng., Maths. and El. Latin; \$1,000.  
 134—Cornell; 2; Classics, Eng., Maths., Nat. Sciences and Object Teaching; \$1,000.  
 135—Ed. N. E.; 5; Eng., Maths., Classics, Book-keeping, French, *German*, Spanish, Organ, Singing, Drawing, Gymnastics and Object Teaching; \$800.  
 136—New York Univ. and Med. Coll., also studies in Europe; Chemistry; E.  
 137—King's Coll., N. S.; 10; Eng., Classics, Maths. and Book-keeping; E.  
 138—8; Eng., Classics, Maths., Sciences and Singing; M.  
 139—Dartmouth; 10; Eng., Maths., Classics, Book-keeping, Drawing and Painting; Cl.  
 140—Cambridge, England; 20; Classics, Maths., Eng., Book-keeping and French; E.; \$1,000.  
 141—Amherst; 2; Classics, Maths., Eng. and French.  
 142—Amherst; 3; Classics, Maths., Eng., Singing and Gymnastics; Cl.; \$1,200.

#### Foreign Gentlemen—Also American Gentlemen who Teach Music.

121—Geneva and Montpelier; 15; *French, German, Italian, Spanish*, Piano and Organ; P.  
 122—Berlin; 4; Classics, *German, French*, Maths. and Piano; Cl.  
 123—Ed. Paris; 2; *French and German*; P.  
 124—Un. France; 2; *French*, Sciences and Maths.  
 125—Ed. Germany; 18; Piano, Organ, *German, French and Spanish*; E.; \$1,800.  
 126—Ed. Germany; 12; *German, French, Spanish, Italian*, Classics, Piano, Organ, Guitar and Drawing.  
 127—Zurich and Berlin; 10; *French and German* Lang. and Lit.; L.  
 128—Neuchâtel; 10; *French*, Maths., Drawing and Gymnastics; \$1,000.  
 129—Gotha; 7; *German, French, Spanish*, Classics and Music; \$1,000 and home.  
 130—Ed. London; 3; Piano, Organ and Thorough Bass; E.  
 131—Paris; 2; *French*, Drawing and Painting.  
 132—Ed. Germany; 4; Nat. Sciences, Maths., *German, French, Italian* and Drawing; C.  
 133—Saxe, Gotha; 24; *French, German*, Classics, Piano and Singing; M.; \$1,500.  
 134—Royal Coll., Bordeaux; 12; *French, Spanish*, Drawing, Painting, Penmanship and Classics; C.; \$1,000 and home.  
 135—Ed. Germany; 1; *French, German*, Spanish, Classics and El. Music; P.  
 136—Oneida; 25; Piano, Singing, *French* and Spanish.  
 137—Hanover; 4; *French, German* and Classics; Cl.; \$1,600.  
 138—Belgium; 5; *French, German, Italian* and Classics; P.  
 139—France; 10; *French, German, Spanish*, Maths. and Drawing; C.  
 140—Germany; 10; Piano, French and German; \$800 and home.  
 141—Geneva; 4; Drawing, Painting and *French*; P.; \$500 and home.  
 142—Berlin; 20; Maths., Nat. Sciences, Mil. Drill and German; L.; \$1,000.

# School Properties for Sale, Rent, or Exchange.

The AMERICAN EDUCATIONAL MONTHLY is read by most of the Principals and School Proprietors in the country, hence we have unparalleled facilities for learning of persons who desire to *buy, sell, or exchange* School Property. By this plan Schools may be offered without exposure to the embarrassment of open announcements.

**Terms.**—Five per cent. commission upon the amount, due as soon as transfer of property is made. No sale undertaken without preliminary fee of five dollars (for advertisement and correspondence). This may be deducted from final commission. For *renting* School Properties same as for sales; Commission being on rent for one year.

Particulars of Properties given to subscribers of the *Amer. Educational Monthly*, or to others on subscribing, \$2.00 per annum. Address with stamp,

J. W. Schermerhorn, 14 Bond st., New York.

**98.—For Sale.**—FEMALE SEMINARY, two and a half hours from N. Y. or Philadelphia. Location very desirable. Three acres of land; house three stories, with finished attic. Will accommodate thirty-five (or more) boarding pupils. Main building, 34x35 feet; wing, 50x19. Porch and veranda. Large and well ventilated. School-room, music, recitation, and reading rooms, parlors, bath-room, etc., etc. Net income, \$3,800.

**103.—For Rent.**—A flourishing and well known FEMALE COLLEGE. Will accommodate 100 boarders and many day scholars. Buildings and furniture may be leased for a number of years. Terms easy. A good opportunity for a Methodist.

**104.—For Sale.**—BOARDING SCHOOL in N. J. Has been established 15 years. Lot 130x200 ft. House in good repair, will accommodate 30 boarders and 60 day scholars. Located on R.R., 3 hours from N.Y. Price, \$9,000— $\frac{1}{2}$  cash.

**105.—For Sale or Rent.**—A flourishing Boarding School for Young Ladies in Va. Has been a successful operation for six years. Three acres of ground. Building in good repair; can accommodate fifty boarders. This is one of the finest properties in the State. Will sell for \$16,000 and rent for \$1,200.

**106.—For Sale.**—A Family Boarding and Day School for Young Ladies, near Philadelphia, in the heart of a rapidly-growing town of 10,000 inhabitants, where a first-class school is needed, and will command a good patronage. Price \$6,500. This is considered a very cheap property.

**107.**—A large Boarding School Property, within a short distance of New York. For Sale on easy terms, or to be let, with the Furniture, for a term of years. The proprietor, having made a competence, wishes to retire.

## The Polytechnic Collection of Sacred and Secular Music for Schools, Classes and Clubs.

Prepared by U. C. BURNAP and W. J. WETMORE.

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# AMERICAN EDUCATIONAL MONTHLY.

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MAY, 1872.

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## *THE EXPERIENCE OF A GERMAN STUDENT.<sup>1</sup>*

“Wer den Dichter will verstehen,  
Muss in Dichter's Lande gehen.”

Who will the poet understand  
Must sojourn in the poet's land.

THIS wise saying of the great poet applies also, in a certain measure at least, to our subject. If we want to understand perfectly, and consequently to appreciate that interesting species of the genus Homo—the German student—we must make ourselves thoroughly acquainted with the soil in which he grows and the atmosphere in which he breathes, because this soil and atmosphere give him that peculiar character, form and shape, which distinguish him from all other people and from all other students in the world.

It is not on the present occasion my purpose to inflict on this learned society a lecture on German geography, history, and sociology—but it might be, perhaps, not quite superfluous to direct your attention to one point which is usually overlooked or not understood at all by foreigners; which, however, seems to me to explain so much.

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<sup>1</sup> This paper was prepared and read by request before a Literary Club; [but it portrays so graphically some of the phases of German University life, that we deem it an appropriate contribution to the educational literature of the day.—Ed.]

Germany, like the United States, is, as you know, composed of many different States. All these States—with the exception only of a few commercial cities and their territories, which are under a Republican Government—are regarded as Constitutional Monarchies. And this is true in so far as they have always been monarchies, and as they, during the last fifty years, have become more or less constitutional, in the modern sense of the word. But these German constitutional monarchies exist, in fact, only on paper and in the eyes of the superficial observer. In reality they are bureaucracies, and the monarchy as well as the constitution serve only as instruments in the hands and for the aims and ends of bureaucracy. And the bureaucratic spirit, imported from France, has taken possession of the German mind in such a manner, that every true idea of self-government in any form has disappeared, and the people of the present generation apparently have lost even the capability of it.

With the exception of the members of the reigning families, and the high and wealthy nobility, every German who wishes to enjoy a really respected and influential social position in his country must belong to the bureaucracy, must be an officer of the State or of the established church, must have a title, a handle to his name. Thus Germany has got an aristocracy of officials, enjoying many important privileges *PER FAS ET PER NEFAS*.

But this modern German aristocracy of the red tape is not a hereditary one; it is perpetually filled up by new accessions. And these new accessions can only enter by the narrow gate of examinations, and these examinations can not be passed without study. Now, in spite of the fact that all officers in church and state are poorly paid, and are not at all expected to steal, the rush into the public service has increased from year to year in such a frightful manner, that the authorities, in their paternal care for public and private welfare, have felt themselves compelled to throw more and more obstacles in the road to office, by making the examinations more and more difficult and severe; so that at the present time, indeed, only good abilities, combined with great assiduity, have any chance to pass them at all. This

is the secret of the high standard in education to which Germany has attained.

It is but natural that people who live in a certain social sphere, of which they are in general very proud, should wish to see their children after them occupy the same honored position. So it is almost self-understood in Germany that the son of an officer, that is of a former university man, of a student in the German sense of the word, becomes, if possible, also a student. At least two-thirds of the German students, I think, are sons of former students.

After these general remarks permit me to give you, in a few strokes, a sketch of my own life as a student.

My father, a clergyman, died very young. He left me, scarcely two years old, as an only child to my mother, who then went back to her father's house. My grandfather took a great interest in my education. A French governess, and, a little later also, a private tutor, were engaged in the training of my mind and faculties; and, as a little boy, writing my a b c, I knew already perfectly well that some day I was to go to the university. When I had reached my tenth year my grandfather resolved to send me to a good progymnasium, or grammar school, in a small Prussian town, where we had friends. My mother accompanied me. Here I was drilled very severely in the rudiments of all possible sciences in the usual way, with an occasional application of the rod. But my recollections of my life in this progymnasium are very dim; it was the monotonous, ordinary routine of a grammar school. Once, and I remember that event as if it had happened yesterday, I felt thoroughly disgusted with Latin grammar, and—to the just horror of my classmates—in the face of our Latin teacher, a model of an old-fashioned schoolmaster, I made the impudent remark that I did not care for Latin grammar, and that I could not and would not study it. Now, the mere idea of such behavior is a capital crime in a German school, high or low. The result was that I got a severe punishment in school, and that on the same day the Professor paid a visit to my mother. After a while I was called into the sitting-room, and found my dear mother almost paralyzed by the terrible news that I would not study my Latin grammar. The Professor, in a long

speech, then made known to me the inexorable fact that I never could go to the university without having studied Latin grammar, and my mother asked me with tears, if I really had forgotten whose son I was! That was too much for me. It was my destiny to go to the university—that was a fact of which I had not the least doubt—and if Latin grammar was a necessary evil for me to endure, which in no way could be helped, of course, I had to submit.

So four other years of my life, with thirty-two school hours a week, were spent in preparation for the university.

When I was fourteen years of age, and had therefore reached that time in life so very important in Germany, when the Church confirms all the children and the State frees them from the obligations to attend school, and they go into business, enter life, and are no longer regarded and treated as children, I was found well prepared to enter the gymnasium proper. And as my grandfather had taken care to secure for me a place in Kloster Ilfeld, in the kingdom of Hanover, I went there, but this time alone, without my mother.

Kloster Ilfeld, an old monastery of the Premonstratensian order, founded at the beginning of the XIIIth century, is beautifully situated on the southern slope of the Harz mountains, just at the point where a narrow, deep and romantic valley opens into the Goldene Aue, one of the richest agricultural districts of old Saxony, in the midst of which rise the grand ruins of the castle Kyffhäuser, where Barbarossa, the great Emperor of the German nation, slumbers, and waits for the great day of his people's resurrection. There, during a terrible snow-storm—I never shall forget that day, it was April 15, 1839—I, the Hessian boy, arrived and rang the bell at the same gate which Thomas Stange, of blessed memory, the twenty-third Abott of Ilfeld, following the advice of his friends Luther, Melancthon, Justus Jonas and John Spangenberg, in the year 1544, had opened to twelve poor boys from the neighboring counties, to give them an evangelical and liberal education; at the same gate, by which, A. D. 1550, had entered the great and the first Rector (President) of Ilfeld, the intimate pupil and friend of Melancthon, the eminent scholar and pedagogue,

whose name to all, especially to all Greek scholars, is to-day still as familiar as it was at his time to all Germany, Michael Neander.

An old janitor in green and gold, the livery of the convent, opened, and, after I had given him my name, conducted me through dimly lighted quadrangles, up stairs and down stairs, through a labyrinth of corridors to the residence of the director, Ernest Wiedash, a famous Greek scholar. He received me with parental kindness, and, as all my papers and reports had been sent to him beforehand, a very short examination was deemed sufficient to give me my proper place in the lowest form of the Royal Pedagogium, *in tertia*. Then a servant was called to show me the room of one of the Professors who had been assigned already by the Faculty as my tutor, that is, the man under whose personal and especial care I stood, who carried on a regular correspondence with my grandfather, who kept my accounts, and without whose consent I could incur no expenses. My tutor was a man of great refinement and in every respect a gentleman. So I took at first sight a liking for him which has lasted forever. He immediately gave the necessary orders in regard to my baggage, my room and other things of that kind. After a short time spent in pleasant and confidential conversation, the bell of the convent called us to supper, at seven o'clock. It was very fortunate that just on that day it was the turn of my tutor and new friend to preside over one of the two long dinner tables in the refectory. Therefore he bade me follow him, and, the Easter term having already begun two or three days, I found myself entering the dining room, the first time *in conspectu omnium*. I felt my heart palpitating a little when I saw all those big fellows staring at me, the poor little one, but my good tutor made me sit down at his side, introduced me to the students next to us, and, as we had amongst other good things excellent omelets with apple-sauce for supper, it was astonishing how soon I felt quite at home. After supper, my tutor showed me my future lodgings and made me acquainted with the most important rules and regulations of the house.

There are about five hundred colleges in Germany prepar-

ing the twenty thousand students for the twenty-two universities. Amongst this large number of colleges, a few are in the possession and enjoyment of old monasteries and their estates, and follow a system of education similar to that of Eaton and Rugby in England. Kloster Ilfeld is one of the smallest of them, having accommodations for only about fifty students. Always two students occupy two connected rooms, a sitting room and a sleeping room. These rooms are the old cells of the monks, not very large, but of good size, with windows opening into the quadrangles, whilst the doors lead into the long corridors. The rooms are furnished by the convent, in the same style still in which they probably once had been furnished for the "poor boys," three hundred and fifty years ago. But the change of time had not spared even our secluded convent. There were no "poor boys" any more in Ilfeld. Most of the students were sons of the Hanoverian nobility, and a very pretty sum was to be paid for board and tuition. But still something of the original "poor boys" has remained. The King of Hanover and the old patrons of the monastery, the Counts Stolberg, have the right to send twelve students to the school, almost free of charge. They use this patronage as a rule always for the benefit of orphans or sons of good families in reduced circumstances. As we were not satisfied with our wooden chairs and empty walls, we had to buy many things to make our rooms comfortable. We were sometimes even a little luxurious in this respect, and the more so, as it was a part of our Director's educational system to encourage us in all things connected with the culture of taste and refinement.

The faculty had been very considerate in the selection of my rooms. I was a foreigner, and so I was mated with a son of the ambassador of Hanover to the Diet at Frankfurt, a city which I regarded almost as my home. Thus every thing went on very pleasantly. My room-mate, when we were left alone and had exchanged some important general views, initiated me into different secrets and mysteries of the institution, told me horrible stories about the cruelty of the "old boys" towards the new ones, promised magnanimously his powerful protection, as far as possible, and

so on. At nine o'clock the church bell rang again, and instantly books were placed on the table. We had to study from nine to eleven o'clock. During this time a professor, in his regular circuit, made us two calls. At eleven o'clock the light had to be put out and we must go to bed. Between eleven and midnight the steward of the convent made his round, opened every room and looked if the light was out and we in bed. I saw him that night with his fur cap, lantern and bunch of keys! I was too excited to sleep. The following day, at six o'clock in the morning, the bell rang. A few minutes later our own servant came in with the boots, "Six o'clock, gentlemen!" We must rise and dress or the visiting professor would find us in bed. Half-past six o'clock breakfast was brought, coffee or milk or chocolate or tea—according to order—and fresh rolls. From seven to eight we had to study, receive a call from the visiting professor and another from the physician. At eight o'clock the bell called all the students together to a short morning service, and after prayer every one betook himself to his class-room, where, for four successive hours, we received the instruction of different professors. At twelve o'clock, we dined together. After dinner, until two o'clock, we had a free time, with the liberty to leave the premises of the convent. From two to four o'clock, again lessons. From four to six, studying. From six to seven, free. At seven o'clock, supper. After supper, until nine o'clock, free, with the liberty to leave the convent during summer. From nine to eleven, studying. On Wednesday and Saturday we were free after dinner till three o'clock, and also from five to seven. These two afternoons were occupied by private lessons, music, drawing, the free field, by fencing and dancing, during the winter term; by longer walks, gymnastic exercises, gardening, playing, etc., during the summer. On Sundays, we rose at seven o'clock, spent our time until ten o'clock as we pleased, but were not allowed to leave our rooms. At ten o'clock we went to our church, where our pastor held the service. From dinner to supper time we were free and could leave the convent until dark. After supper we were again confined to our rooms. No student was allowed to visit anybody outside the con-

vent without permission. Every one who came home after time was reported by the janitor. Our punishments consisted in confinement for one or more days, either to the premises of the convent, or to our own rooms, or to prison. And if these punishments were of no effect, the student was sent away. But I do not recollect that such an extreme case happened in my time.

We had excellent professors, all of them men picked, not only for their learning and abilities as teachers, but also for their general character as gentlemen. With such instructors, very small classes, and thirty or thirty-two hours a week, we could scarcely help learning something. Discipline in the class-rooms was easily maintained. We were all too much engaged in hearing, thinking and answering questions, and if—a very rare case—a student forgot himself, one look or word of the professor was sufficient to put him right. But outside the class-rooms we were pretty wild boys, with a decided inclination to play the university student in the worst sense, and to break in every possible way all the laws and regulations of the convent.

Vacations fell at Easter, a fortnight ; at Whitsuntide, one week ; in the Autumn, six weeks, and at Christmas, a fortnight.—(*Concluded next month.*)

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### *WILD FLOWERS IN NORWAY.*

THE abundance and brilliancy of color of the wild flowers of these Northern countries is remarkable. The most common of all at this time is our pansy. Finding it first near a fence by a mill, the natural inference was that a neighboring garden had overrun its borders. But no, it is as wild and as common here as our own eye-bright, springing up by the roadside, among the tall grass in the meadows, and standing in thick clusters on the rocks or hiding in the clefts. Of every size, except really large, and of the usual colors, in every shade and variety of arrangement. Sometimes wholly white, sometimes a dark red purple throughout, they are oftenest a medium size, with their two upper petals



a soft blue purple shading through blue into pale yellow below. Looking at them fluttering in fresh masses on the rocks, they give the effect of the most delicate purple flowers, so light that the wind must blow them away. They are so beautiful and so abundant that our wild violet, which grows here also, seems hardly worthy of notice.

Another of our choice flowers, equally common, is the lily of the valley, precisely the same in color, size, and perfume as our garden flower. Coming from Stockholm, at the different stations we found children under the car windows with hands and arms and baskets full of them, great delicious bunches, for a penny each. We were still incredulous enough to ask where they came from, but when the small brown fist pointed to the woods over beyond the station, there was no longer room for doubt. The forget-me-nots of our gardens also abound here, growing a little smaller, as a general thing, but of the same pure blue, sometimes coloring whole fields.

All our common wild flowers come and go here at the same time and in the same order as in New England. We miss no one except the eye-bright and the arbutus, which should not perhaps be called common with us, it is found in so comparatively few places. The sandy soil in and about the pine woods of Norway seems perfectly adapted to its growth, but we have not been able to find any trace of it where we have been. Among many that are quite new to us is a rich purple blossom, delicate and small, but growing in full clusters low on the ground. Many fields are bright with a tall flower a little like our meadow pink, of a color so deep as to be almost crimson, making a fine contrast to the ox-eye daisy of our meadows, which is often mixed with it. A tall spike of blue flowers, as blue as our deepest larkspur, borders many of the country roads, roses grow wild in almost every color—white, yellow, red and pink, and of great fragrance; the wild geranium of our fields has a much richer color than with us, our harebells grow not only on the rocks and hills but by the roadsides, and purple columbine, large and dark, takes the place of the light red of our rocks. The variety of bright yellow flowers is almost innumerable.

## OBJECT TEACHING.

AN Object Lesson may be defined as a certain method of instruction relative to a given Object, the object being the subject of the lesson. By Object Teaching, however, we understand a *particular system of using objects and of treating subjects* in the processes of instruction. It is, then, the manner and purpose of using objects and the method of treating subjects which chiefly determine whether a given mode of instruction may be called Object Teaching. The term is sometimes used with the limited signification of object lessons; but it is here taken in its broadest sense, applying also to the teaching of any subject, if that teaching be confined to nature in its method.

Before deciding for or against this system of instruction, it will be well to consider some of the grounds upon which it has been based.

To lead children to become good and reliable citizens seems to be the direct aim of the State in the establishment and support of its schools. This implies that every individual be possessed of sufficient intelligence and skill to provide for the material wants of himself and those directly dependent upon him; also of sufficient perception of moral truth and discipline in moral courses of action, to fit him for the civil and social duties of life.

Advance in civilization, however, demands more than this. It requires men and women with acumen to perceive opportunities for progress, and power to evolve from those opportunities positive results. To increase the supply in this direction should also be the object of the State.

Again, it must be remembered that, underlying this development of man in his social relations, is his development as a unit of humanity, a spirit yearning and active, possessing definite relations to the whole universe.

The question at once arises,—*Where* and *how* shall our efforts be directed in order to secure these desirable results? To the first part of the question, it may be answered:—Wherever it is the province of any one to teach. The object of all scholastic discipline should be the making of thinking men and women.

Inasmuch as statistics show that not more than half the names entered on the registers of the primary or *perceptive* grades afterwards appear on those of the higher grades, and since the schools of the rural districts are composed chiefly of this primary element, we may direct our strongest efforts to this point. By this means we shall reach the largest numbers, as well as lay that foundation for a higher education which can be laid no where else than in the primary school. Let this foundation be compactly built, and less difficulty will be experienced subsequently in rearing the walls of the structure. A method of instruction adapted to the first wants of children must therefore be devised.

Having decided *where* to direct effort, before determining how it should be done, we must obtain clearly defined notions of the nature and requirements of the material upon which we are to work. Activity, motion and change, which constitute the law of life, are no where more observable than in the child. His constant demand is for nutrition and opportunities for the exercise of *all* his parts, which, along the electric wires nature has furnished them, truth is flashed inward to the soul. The child also demands language for the expression of the ideas thus gained, and afterwards uses the same terms figuratively to express abstract truths and spiritual experiences.

Such being the nature of the material, our next thought must be given to the natural order of growth revealed in the more spontaneous development of the young mind. It is well known that power of acquiring knowledge is rarely manifested through the organs of sense. In the child we observe a natural tendency, upon taking up an object, to look at it, feel of it, balance it on his finger, smell and taste of it, and to put it to his ear, thereby to ascertain its physical properties. In the exercise of his senses, therefore, the child expresses a keen delight, and, at the same time, lays a foundation for all his knowledge of the external world. Even in older and more fully developed minds, we observe a spirit of investigation, an instinctive desire to know by personal observation the truth of whatever statements are presented to them.

Indeed, the amount of information acquired from all

sources seems to depend, to a very considerable extent, upon the clearness of the perceptions derived through the senses. The senses are, therefore, the gateways to knowledge, and the wider they are opened the clearer will be the perception, and the completer the knowledge gained.

Granting, then, that the child first informs himself of the physical properties of what is before him, by the help of the perceptive faculty, careful observation will prove that he next remembers the results of this process, or, combining certain features of several perceptions, forms one imaginary picture. The higher process of reasoning is then called into exercise. Thus all the faculties of the child are brought into play in their natural succession, and he experiences a real process of education.

Our method of instruction must then be based upon this natural order of development. If our first duty is to cultivate the perceptive faculty, we have only to present occasions to the restless eyes, ears and hands. How can we do this, unless use is made of objects? When these objects are used in a systematic manner, merely as a means of training the several senses of the child in habits of ready and accurate perception, this is called Object Teaching in an introductory stage. In the next stage objects may be employed as a means of instruction in given subjects, careful attention being given at the same time to a proper disciplining of the pupil's mind.

In this step objects may be used in either of the following ways:—First, an object, or a quality of an object, may be taken as the subject of the lesson in order to develop correct ideas concerning it; second, an object may be made to represent another but remote object, that a more definite knowledge of the latter may be indirectly gained; and third, objects may be used for the development of abstract ideas.

The real objects need not always be presented, for we may sometimes appeal to memory or conception.

The use of objects must now become systematic, and the accomplishment of some definite end be kept in view. What part, then, of the great sciences, to which we would lead, is best adapted to the mental capacity of childhood? Evidently every science must be reduced to its elements,—

first principles must be sought. But, as in this direction the beginnings of science are hidden, and we can only hope to discover them by the exercise of our powers of observation, and by forming higher and higher generalizations from their carefully collected results, we are forced to conclude that the beginnings of science should be the first natural steps in the processes of investigation. To begin at the beginning, every subject must be reduced to its elements. If lessons in "Number" are given, the result will be a foundation for Arithmetic and the higher mathematics. Lessons on plants, animals, minerals, qualities of objects and manufactures will, in like manner, lead directly to Botany, Zoology, Mineralogy, and some of the truths of Physics and Chemistry. Lessons in size and position of objects introduce Geography, while form and drawing, especially inventive drawing, form a basis for the practical arts of designing and architecture.

The teacher should be prepared to lead his pupils on, without straying from the paths of nature. But one difficulty should be presented at a time, and these difficulties so adjusted, that, in proceeding step by step, the child will always pass from the simple to the more difficult, from the concrete to the abstract. After the child has clearly gained the idea, give him the language in which to clothe it, and words will then be treasured by him as gems of priceless value.

The principles of Object Teaching further require that we never generalize before all the particulars are understood, proceeding thus systematically in the synthetic order of nature instead of the analytic order of a subject. The practice of reading thus, at first hand, from the volume of nature, develops a widely different power from that gained by taking the results of the investigations of others and tracing back the proofs. The former tends to produce directive power; the latter, to promote mechanical imitation. The great demand of the age is for the development of this directive intelligence.

Such are some of the arguments and principles upon which Object Teaching is founded. It may be thought that these principles can be successfully applied only to

elementary instruction, where text-books are not used. Although actual study and the use of books are essential in more advanced work, the same principles can be applied to a far greater extent than at present.

In much of the instruction given in many schools of a higher grade, the training and education of the thinking faculties of the pupil are almost entirely neglected, with the result that the pupil's mind becomes the store-house of the fruits of other men's harvesting, rather than a field laden with products of his own planting and raising.

It may be impossible to devise a single method of instruction by which all branches can be taught with the same success; yet it is possible to base all modes of teaching on the same fundamental principle, the disciplining of the mind. To accomplish this, more natural methods must be adopted. As an example, the subject of English Grammar is commenced by the student's learning that it is the science of the English Language, and is divided into Orthography, Etymology, Syntax and Prosody. Definitions of terms may be committed to memory, and yet the student have a very imperfect knowledge, if any, of their real meaning, or of the basis for such a division of grammar. So, also, the different parts of speech, with their respective classifications and properties, are frequently learned without an independent thought on the part of the pupil. This course is directly opposed to the great first principle of Object Teaching, as well as to the minor principle—first synthesis, and then analysis.

Having decided to build up the science, with what shall we begin? What are the ultimate elements of the English language, as it is properly treated in English Grammar? *Words*, if we consider the expression of ideas, and *sentences* if we consider the expression of thoughts. The subject may, therefore, be commenced with either words or sentences. Let the work now progress step by step, one thing at a time and in the natural order of dependence. Thus systematized, Grammar, or language lessons, may be commenced at a much earlier age than is customary; or, if left until the usual time, it can then be made more thorough by the objective method.

May not other subjects be treated in a similar manner? In elementary work in Arithmetic the same course can be pursued, and, even in the more advanced study of the same subject, more of the principles and rules may be developed objectively by questioning, and less occasion given for this frequent memorizing of words without ideas. The same is true of Algebra and especially of Geometry.

The latter is specially adapted to cultivate the reasoning powers. How comparatively little is this discipline, when, the theorem given and the figure drawn, the student has only to commit the demonstration, as found in the book, *verbatim et literatim*. Let the theorem be given and the simple basis of the figure, and then require the student to prove the theorem by his own demonstration, and the desired discipline will be better secured. This is not mere theory; practice has proved it a success. Other subjects, the sciences for instance, may more or less conform to the objective system.

Object Teaching is a *systematic* method of instruction; as soon as it lacks system, therefore, it becomes a failure. Where, then, are the teachers, who, fully realizing the true purposes of education, are practically familiar with the constitution of the mind and the order of the development of its faculties? Where shall we find those so versed in each science that they are able to discern its beginnings and successive stages, and then skillfully adopt the means to the desired end?

This demand upon the teacher can only be answered by patient, persevering labor. As in all other professions, there must be a willing and constant plodding at details. At the present time there must also be earnest, original thought.

Old and new methods are now clashing. Everything is in confusion. While some are carried away with novelty, there is a disposition on the part of others to suspect all attempts at modification of old methods as visionary adventures. This age is witnessing a revolution in educational methods. It is the universal law of progress.

But, when the contest is over, we may confidently hope that the cause of education will have taken an important step in advance.

MISS E. M. BRIGHAM.

*NOTES ON THE SCIENCE AND ART OF TEACHING.*

## PART FOUR.

JUVENILE curiosity—being a wholesome inquisitiveness, a natural thirst for knowledge—should be encouraged rather than discountenanced. The pupil should not be ridiculed, or laughed at, if he fail to convey his ideas in suitable or intelligible language. Rather let him be requested to put his question in other words, so that the teacher, if possible, may discover his meaning. This being done, let the teacher courteously furnish the required information, taking care to use words suitable to the child's capacity. No teacher should be what is called "a scold." It is very objectionable to chide pupils frequently or passionately. It invariably lessens the teacher's authority and diminishes the pupil's respect for his person. If they have broken any of the rules, a few words representing the reprehensible nature of their offence, spoken in a kind and sober tone, will be far more effective in producing sorrow and amendment than many hasty rebukes or sundry angry allusions. In fact, the teacher who would command success must diligently study the temper, disposition, and character of his individual pupils, and "fill them, not so much with learning as with the desire to learn"—not so much with the fear of punishment as with the desire not to offend. He must lead them to discover at an early age that wisdom and virtue are the great objects of all learning; "that the end of education (as Milton affirms) is to repair the ruins of Eden by regaining to know God aright;" and that the more they advance in learning the nearer they approach to Him who is the fountain of all knowledge.

People naturally love liberty, and dislike anything that tends to curtail their privileges. So is it with children. By nature they entertain an antipathy towards the performance of compulsory duties, and have an aversion for anything enjoined as a business, particularly if it tends to limit their pleasures or control their freedom. The skillful teacher will therefore induce them to perform their various duties

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without giving them reason to feel, or even suspect, that they are in the harness of restraint, and must be obedient to the whip of compulsion. He may even possibly succeed in creating in some of them, if not in all, a desire to be taught for the sake of the honor, delight and recreation the information may afford; but, if possible, he will never allow them to suspect that the acquisition of any subject, or part of a subject, is imposed as a compulsory task. The moment he does so its study will be shorn of its attractions, and may be regarded as "a punishment rather than a pleasure."

Children love dominion, and take much delight in exacting obedience to their will. During their infancy this tendency displays itself in frequent fits of weeping and "unreasonable peevishness;" in boyhood the presence of the "disease" is indicated chiefly by sullenness of temper, or by "the desire to have things as their own." This love of power and inordinate possession, being the foundation of many evils and the roots of contention and injustice, must be promptly rebuked and, if possible, extracted out of the system. If children strive together for the mastery, as often happens, and the case be duly reported to the teacher, he should, as a rule, give judgment against the originators of the strife, calling attention to the spirit of the Saviour's words—"Who-soever will be chief among you, let him be your servant." Though it be necessary for the teacher to curb the insolent or unruly, and to check ill nature, yet, as a rule, it would not be prudent of him to countenance the accusations or informations of pupils against each other. Such charges are generally the result of anger, envy or malice—feelings which need repression, not development. However, if, on investigation, he finds the accused "guilty," he would do well to reprove him in private, and, if possible, induce him (1) to solicit pardon from, and (2) make reparation to, the injured party—both to be done as if the offender was acting of his own free will. Such a course will make the apology more easy to the one and more acceptable to the other, whilst it engenders and promotes mutual feelings of good nature, civility, courtesy, and respect. In well-regulated homes, children never get what they cry for, or basely ask. Of course, their necessities are supplied, but the desires of pas-

sion or fancy are firmly denied; so should it be in every well-ordered school. Pupils should be taught, so far as possible, to practice the virtues of resignation, submission, modesty, and self-denial, so that they may cheerfully "bear and forbear," cordially sympathizing with each other in every little trial and difficulty incident to "Life at School," being ever ready to give, ever ready to share their little stock of delicacies or curiosities.

Faults arising from inadvertency, mental weakness, forgetfulness, unsteadiness, and absence of mind—when not willful—may be treated with some little indulgence, more especially if the pupil is dull of comprehension or perception. Probably the best way to correct such errors or irregularities is to recognize them as constitutional but conquerable misfortunes, whose subjugation will require continued efforts on the part of the pupil, and continued tenderness and good will on the part of the teacher. The influence of mutual affection will be almost sure to sharpen the intellect of the child and to open his mind to do his duty faithfully and well. Without this incentive to action, "there would probably be (as Locke truly observes) much uneasiness and but little learning."

Many educational writers seem to think that the use of "the rod of correction" is inconsistent with the spirit and progress of this enlightened age. They therefore affect to regard such punishment as a relic of barbarism and a crime against juvenile humanity. The theories of such kind-hearted gentlemen are seldom founded on experience, and (we regret to say) will not stand the stern test of practice. In teaching, as in other things, we must take human nature as it is—as we find it, and not as we hope it may be some centuries hence. Guided by the experience of mankind, we must deduce our inferences from general principles. It would be folly to draw our conclusions *from* (or to found a theory *on*) isolated cases of permanent success, as the result of mere moral suasion. The oldest Book in the world declares, with divine authority, that "He who spareth his rod hateth his son; but he that loveth him chasteneth him betimes."<sup>1</sup> "Chasten thy son (says Solomon) while there is

hope, and let not thy soul spare for his crying . . . . for if thou deliver him thou must do it again.<sup>1</sup> Foolishness is bound in the heart of a child, but the rod of correction shall drive it far from him.<sup>2</sup> Correct thy son and he shall give thee rest, yea, he shall give delight unto thy soul."<sup>3</sup> While extracting these precepts, our minds revert to the writings of a sage of an anterior age. We remember that it is recorded in the 1st Book of Samuel that God himself punished a certain parent, and pronounced a fearful doom against his posterity, because he neglected his duty in this respect. We allude to Eli, Judge of Israel. When informed of the evil deeds of Hophni and Phineas, the soft-hearted old man (believing, doubtless, in moral suasion) merely pointed out the enormity of their offence, hoping probably that they would repent and reform; but he did not inflict any tangible degradation or punishment, and for this reason the Lord declared that both his sons should die in one day, that his priesthood should be given to another, and that all his posterity should perish in the flower of their age.<sup>4</sup> What a dreadful punishment of the old man's apathy, and of his weakness in neglecting to "Train up his children in the way they should go."<sup>5</sup> Well might Solomon say, "Withhold not correction from thy child, for if thou beatest him with the rod of correction he shall not die. Thou shalt beat him with the rod and deliver his soul from hell."<sup>6</sup> And to the young he says in another place, "Apply thy heart unto instruction and thine ears to the words of knowledge.<sup>7</sup> Hear counsel and receive instruction, that thou mayest be wise in thy latter end."<sup>8</sup> These precepts give a divine sanction to the judicious application of corporal punishment—to the discreet use of the rod, and not only invest the parent with the necessary authority, but absolutely require him to exercise it efficiently; and, moreover, the practice of all nations, barbarous and civilized, seems to indicate that such a right has always been recognized by mankind in general.

In the early ages of the world, parents were the principal (and in most cases) the sole teachers of their own children. Every father had to instruct his sons in the arts of peace and

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1 Proverbs xix. 18-19. 2 xxii. 15. 3 xxix. xvii. 4 See 1 Sam. ii. 22-36. 5 Proverbs xxii. 6.  
6 xxiii. 13-14. 7 xxiii. 12. 8 xix. 20.

war, so that he was tutor, chaplain, judge, and military commander, all in one. In like manner the mother had to teach her daughters the arts of domestic life, attending also to the education of her sons during their younger years. But, as civilization advanced, the arts of life became more numerous and complex, and domestic or public duties compelled parents to delegate their educational duties and privileges to another, who thus became the *locum tenens* of the parent. Then a number of families in the same locality joined in sending their children to be instructed by one such officer—the people, by common consent, endowing him with full parental powers over the respective children, so long as they might be under his jurisdiction. This officer, by virtue of his election and immemorial custom, became, so to speak, the common parent of all the pupils entrusted to his charge, being authorized to treat them in every respect as if they were really his own. Probably it was thus public schools first originated, and in this way, instead of every parent in a town or district being of necessity compelled, as of old, to assume the office of private teacher to his own family—thereby neglecting other duties—a common tutor was (and is) appointed to represent them all, who, by reason of his special training and experience, is far more skillful as an educator than each individual parent could possibly be. In the present age the teacher is not only recognized as the legal representative of the parents in scholastic matters, but likewise considered to be endowed with full parental powers while in the school room. Public opinion supports his influence, and the laws confirm his authority. Indeed, it seems to be tacitly understood, if not generally conceded, that “the teacher stands in the parents’ shoes.” Let him, therefore, make the most of his position, and act towards “the little ones” as if they were really his own—judiciously and discreetly exercising his delegated authority according to the best of his judgment and “the light that is in him;” not scrupling to inflict even corporal punishment when he considers it absolutely necessary and conscientiously believes that, under similar circumstances, an intelligent and prudent parent would do likewise.

G. V. LE VAUX.

NECROLOGY OF EMINENT TEACHERS  
DECEASED IN 1871.

THE year 1871 was conspicuous over the years preceding it for the death of very many eminent laborers in the cause of higher education. Twenty Presidents of Colleges, foreign Collegiate Schools or Theological Seminaries, and other schools of the highest grade are numbered among its dead, and among those who though not the presiding officers of these institutions had been professors in them, and of the great lights in literature and science the number is still greater. Some of them have left vacant places in our science and literature, which we, who survive, shall hardly be able to fill during the present century. We commence, as usual, with American teachers.

On the 9th of January, NATHAN HALE died in Boston, Mass. The name was an illustrious one in our history, and right worthily did he bear it. Born in Boston, Nov. 12, 1818, he was educated in the Boston Public Schools and in Harvard College, graduating in 1838, with high honors. He then studied law and attained the degree of LL.B, in 1840; but his preferences were for journalism, and he became at once a member of the editorial staff of the *Boston Daily Advertiser*, and within a few years its principal editor. In 1843, he added to this the editorship of the *Boston Miscellany*, but his excessive labor on these periodicals for a period of twenty-five years, impaired his health and made continuous literary work impossible. After a period of rest, he accepted for a time, the professorship of Rhetoric and English literature in Union College, a position for which his thorough knowledge of the whole range of English literature, and his exquisite style as a writer eminently fitted him. But the recurrence of his old trouble, neuralgia, the result of intense brain labor, compelled him to relinquish his professorship in 1870. He subsequently aided his brother, Rev. E. E. Hale, in editing his magazine, *Old and New*, and in some literary correspondence, but finally was compelled to succumb to disease.

Jan. 16, Rev. ADAM WILSON, D.D., died at Waterville Me., at the ripe age of 77 years. He was a native of Maine, a graduate of Bowdoin College, Brunswick, Me., in 1818, ordained to the Baptist Ministry in 1823, after a year or two of teaching, in 1828 founded the *Zion's Advocate* newspaper at Portland, which he conducted till 1839, and again from 1842 to 1848; in this paper he rendered valuable assistance to Waterville College (now Colby University). After retiring from the *Advocate* he removed to Waterville, and lent his energies, while his health permitted, to the promotion of the interests of the college. He received the degree of D.D. in 1851. While perhaps not engaged in actual instruction in Colby University, Dr. Wilson deserves a place here as one of the most active promoters of education.

On the 26th of January, GEORGE TICKNOR, one of the most illustrious names in American literature, died in Boston. He was born in that city August 1, 1791, was graduated from Dartmouth College in 1807, and was admitted to the bar in 1813, having devoted three years after graduation to the study of the classical languages. He never attempted to practice the law, but in 1815, went to Europe and prosecuted his studies and researches into the languages and literature of modern Europe for five years, and on his return devoted himself to the duties of the professorship of the French and Spanish languages and literature and Belles Lettres in Harvard College, to which he had been elected in 1816. In 1835, he resigned and went abroad a second time, remaining three years, and obtaining the materials for his great work, *History of Spanish Literature*, to which he devoted his time for the next eleven years. It was published in 1849, and received the highest commendation from both Spanish and German scholars, and was translated into both of these languages. He had previously prepared a *Memoir of Lafayette*, and in 1867, published an admirable biography of his friend William H. Prescott. He was also a contributor to the *North American Review*, and edited several works. But one of his strongest claims to the gratitude of the friends of education was his constant and unwearied labor to make the Boston City Public Library worthy of his grand ideal. His death in his 80th year was rather the result

gradual decay than of acute disease. He received the degree of LL.D. from Harvard and Brown, and that of Lit. Doc. from the Regents of the University of the State of New York.

On the 29th of January, SAMUEL HARVEY TAYLOR, L.L.D., for thirty-three years the Principal of Phillips Academy at Andover, Massachusetts, died of apoplexy, aged 64 years. He was born in Derry, N.H., in 1807, graduated from Dartmouth College in 1832, studied for the ministry at Andover Theological Seminary, graduating therein in 1835, but was never ordained. He was a tutor in Dartmouth College in 1836 and 1837, and in 1838 was appointed Principal of Phillips Academy, Andover, one of the two best classical endowed schools in New England, and remained at the head of it with constantly increasing influence and ability till his death. He was in almost every respect, a model teacher; the breadth and thoroughness of his intellectual culture, and especially his profound classical scholarship, his sound judgment, marked good sense, his well balanced mind, his genial temperament, his unaffected kindness of heart, and his staunch integrity and purity of heart all made him a prince among teachers. He received the honorary degree of LL.D. from Brown University, in 1854. Dr. Taylor was the author of several valuable educational works; among others, "Kühner's Greek Grammar," and "Elementary Greek Grammar," "Method of Classical Study," and "Classical Study." Since 1853, he was one of the editors of the "*Bibliotheca Sacra*."

Two days later, on the 31st of January, Rev. ELEAZAR THOMPSON FITCH, D.D., for fifty-four years Professor of Sacred Theology in Yale College, died in New Haven, Conn. He was born in that city January 1st, 1791, and received his early education in the Hopkins Grammar School and Yale College, graduating from the latter in 1810. He spent two years in teaching, and then passed through a full course of theological study at Andover. He was ordained, and for two years edited the *Panoplist* in Boston, but in 1817, on the death of President Dwight, was called to the professorship of Sacred Theology in the Yale Theological Seminary, and

the pastorate of the College church. He also edited for some years, *The Christian Spectator*, the organ of the New Haven Theology. As a writer, Dr. Fitch was remarkable for the purity and elegance of his style, and his rare logical powers, and his sermons, though marred by an ungraceful delivery, were full of sound thought, lucidly and eloquently expressed. As a teacher he was conspicuous for the clearness of his ideas and his apt way of stating them, and though too modest ever to be very popular with the masses, his associates and his pupils greatly esteemed him. He resigned his professorship in 1852, in consequence of impaired health, but was immediately appointed Professor *Emeritus*, and was so borne on the college rolls till his death. He performed occasional duties for some years, but latterly his failing health and memory had incapacitated him for mental effort.

February 1st, Rev. THOMAS HARVEY SKINNER, D.D., LL.D., died in New York City. He was born at Harveys Neck, N. C., March 7, 1791, was educated at the College of New Jersey (Princeton), whence he graduated in 1809. He at first studied law, but finally decided to enter the ministry, and after a course of theological study at Princeton, was licensed to preach in December, 1812, and ordained in 1813, co-pastor with Dr. Janeway, in the Second Presbyterian Church, Philadelphia. He remained in the pastorate in that city till 1832, when he removed to Boston, and in 1833, was appointed Professor of Sacred Rhetoric in Andover Theological Seminary. In 1835, he returned to the pastorate in New York City, and in 1848, was elected Professor of Pastoral Theology and Homiletics in Union Theological Seminary, New York City, the Mercer St. Presbyterian Church of which he had been pastor endowing the professorship. He retained this position until his death. He was an able writer, a lucid and logical reasoner, and very successful as an instructor. He was the author of several religious works, mostly on topics connected with his professorship.

February 11th, Signor ANTONIO BAGIOLI, a teacher of music in New York City for 38 years, to whom many of the most eminent public singers were indebted for their training, died in New York, aged 76 years. He was widely known.



and esteemed for his musical knowledge and his amiable character.

On the 21st of February, Miss HANNAH W. LYMAN, Vice-Principal of Vassar College, and one of the ablest and most successful teachers of the present century, died at the college, near Poughkeepsie, N. Y., at the age of 55 years. She was a native of Northampton, Mass., a sister of the martyr missionary, Henry Lyman, trained for a teacher by Mary Lyon, and commenced teaching very early. For many years she had been at the head of a school for young women at Montreal, Canada, which had become famous, all over the continent, for the ability with which she conducted it, and the enthusiasm and love of learning, as well as the refinement and culture which she managed to infuse into her pupils. She was called from this school to the vice-principalship of Vassar College, and there, with the great facilities for instruction which she found ready to her hand, she threw her whole soul into the work of teaching, and while she was largely instrumental in giving the college its present high reputation, she sacrificed her life in her zeal for her work.

In February died also, Rev. WILLIAM FREDERICK WILLIAMS, D.D., a missionary of the American Board, at Mardin, in Mesopotamia, Asiatic Turkey, where he had been long stationed, at the age of 53 years. Dr. Williams was born in Utica, educated there and at Yale College, and studied theology at Auburn, New York. He was ordained in 1848, and the same year sailed for Syria, being stationed at first at Beirut. A man of brilliant talents and of genial, hopeful temperament, he was found to be admirably adapted to the work of training native helpers and preachers in the missionary work, and was engaged in it for some years. Latterly, he had been laborious and active in establishing a theological seminary for these preachers at Mardin, of which it was expected that he would be the principal. He was very successful in imparting instruction with such clearness that even the dumbest could not fail to comprehend.

In the same month AMOS S. COOKE, a missionary teacher who had taught the Sandwich Islanders for thirty-five years, died at Honolulu, S. I., greatly esteemed and lamented.

In April, died Mrs. ELIZA WARE FARRAR, the widow of Prof. John Farrar of Harvard College, and herself for many years an accomplished teacher as well as an admirable writer. Her death occurred at Springfield, Mass., where she had resided for some years. She was 78 years of age. Her "Young Ladies' Friend" has long been a classic, and her "Recollections of Seventy Years" is one of the most charming of books.

On the 5th of May, Professor JOHN SMITH WOODMERE of Dartmouth College and the Chandler Scientific School died at Durham, N. H., in his 52d year. He was born at Durham, N. H., in 1819, educated at South Brunswick, N. J., and at Dartmouth College, whence he graduated in 1841, taught in an Academy at Charleston, S. C., and read law from 1842 to 1846. In 1847, he went abroad and visited all the principal countries of Europe, performing much of his journey on foot. On his return he completed his course in legal study, was admitted to the bar and practised his profession till 1852, when he accepted the chair of Mathematics in Dartmouth College, and became also one of the teachers in the then partially organized Chandler Scientific School, in the full organization of which he took an active part. In 1856, he was appointed Professor of Civil Engineering in the Chandler Scientific School, and also the practical head of that department of the college, and still retained for some time his professorship in the college proper. To him is due very largely the success of the Chandler Scientific School. He was, indeed, a teacher of uncommon ability and talent, earnestly sincere, of great integrity and dignity, and yet genial and courteous manner.

On the 23d of May, two men, both eminent in the public and successful in early life as teachers, and both to the end of their death deeply interested in education, died, namely, WALTER CLARKE, D.D., at Buffalo, and Right Rev. Dr. WESGATT CLARK, D.D., LL.D., Bishop of the Methodist Episcopal Church, at Cincinnati. By a singular coincidence these men, both eminent in their respective churches, bearing the same name, and dying on the same day, were very nearly of the same age, 59 years, Dr. Walter Clarke being the younger by only forty days.

Bishop Clark was born in Mount Desert Island, Me., February 25th, 1812. His early years were without any opportunities of school culture, but his mother taught him the elements of learning. He first designed to follow the sea, but relinquished his purpose, and at 19 years of age left home to procure an education, and five years later, years of intense study and toil, graduated from Wesleyan University, Middletown, Conn. He was, strange as it may seem, an excellent scholar, and became soon noted as a graceful writer and speaker. For seven years after his graduation he was at the head of Amenia Seminary, N. Y., and while there prepared two or three excellent text books. Of his subsequent labors as preacher, editor of the *Ladies' Repository* for twelve years, and Bishop for seven, this is not the place to speak, farther than to say that the most cherished object of his later years, the one on which he bestowed toil, and thought and money without stint, was the foundation and endowment of the Wesleyan Female College in Cincinnati.

Dr. Walter Clarke was not so long engaged in practical teaching, but his interest in educational matters was equally strong and abiding. Born in Middletown, Conn., April 5th, 1812, he literally worked his way through Yale College in 1837, but graduated with a high reputation for scholarship. He studied first medicine, then law, and finally theology, teaching all the while for his support. When nearly prepared for admission to the bar, he was offered the position of Professor of Greek in the College at Mobile, Ala., with the promise of the presidency of the institution in a year or two. He accepted it, taught with great success for a year, and returned North, leaving the greater part of his salary undrawn, intending to return in the autumn, when he was apprized that the college had utterly collapsed. He then turned his attention to theological study, and entered the ministry in Canterbury, Conn., whence he removed in 1844, to Hartford. He was a man of rare eloquence and power, both in the pulpit and on the platform. He was among the most zealous and efficient advocates for the establishment of the Hartford High School, and during his whole residence in Hartford, was an active member of the School

Board, and after his removal to New York and to Buffalo his interest in the education of the young was constantly manifested.

Still another man of note as an instructor died May 27, Rev. GEORGE EDMOND PIERCE, D. D., President of Western Reserve College from 1832 to 1855. He was born in Southbury, Conn., in 1794, and graduated from Yale College in 1818. He took the Presidency of Western Reserve College, Huron, Ohio, in the dark days of that institution, and struggled manfully on until it was relieved from its embarrassments and though not richly endowed could go on without delay when he surrendered his charge into other hands. He received the degree of D. D. from Middlebury College in 1853.

The noted political leader, CLEMENT L. VALLANDIGHAM, whose death by accident, occurred on the 17th of June, was from 1840 to 1842, Principal of an Academy in Maryland, and was said to have been very successful as a teacher. But his vocation was for a different life, and perhaps should hardly be reckoned among the roll of worthies who have given their lives to educational pursuits. Very few indeed of our more prominent northern men in political life have failed in a share in the teacher's work in their early days. The late Senator Howard, of Michigan, was a teacher and a successful one, as his pupils bear witness, in his college days and for a year or two after.

IRA DIVAL, who died June 22d, at Baraboo, Wisconsin, had been connected either as teacher or superintendent with the schools of St. Louis, for over twenty years, and at the time of his death was State Superintendent of Public Instruction for Missouri. We regret that we have not been able to obtain further details concerning Mr. Dival.

On the 24th of June, Commodore GEORGE S. BLAKE, a retired officer of the U. S. Navy, died at his residence, Longwood, near Boston, aged 70 years. Commodore Blake is entitled to notice here, not only for his extensive attainments, his labors in connection with the coast and other surveys by which he added materially to our geographical knowledge, but as having been from 1858 to 1865, Super-

tendent of the Naval Academy at Annapolis, and afterward at Newport, R. I.

The Rev, GEORGE WILSON MCPHAIL, D.D., LL.D., who died on the 28th of June, at Davidson College, North Carolina, was one of our most eminent educators. He was a native of Norfolk, Virginia, and fifty-five years of age. He graduated from Yale College in 1835, and from Princeton Theological Seminary in 1839; was pastor for several years at Fredericksburg, Va.; then President of Lafayette College, Easton, Pa., until 1863; from thence he became connected with Dr. Saunders' Institute in West Philadelphia; during the war he was residing in the South, and at one time we believe was connected with the University of Mississippi. In 1866, he was elected President of Davidson College, and held that position till his death. He was a man of decided ability, and of high mental culture, unassuming in manners, a true gentleman and a true friend. He received the degree of D.D. from Jefferson College, Penn., in 1857, and that of LL.D. from the University of Mississippi, in 1868.

On the 1st of July, died the Rev. W. HOWARD, D. D., President of Well's Female College, Aurora, N. Y., and pastor of the Presbyterian church in that village. Dr. Howard was born in London, Eng., Sept. 19, 1817, and was educated in Magdalen Hall, Oxford, where he distinguished himself as a scholar, and for some years after his graduation was engaged in teaching in London. In 1849, he came to the United States, and his brilliant classical attainments soon procured him a situation as professor in one of the Western colleges. He received soon the offer of a better professorship, and in the next fourteen years made three or four changes, the last being to the principalship of Erasmus Hall, Flatbush, L. I., one of the best of the old endowed collegiate schools in the State of New York. He had previously preached occasionally, holding a license from the Presbytery of Northumberland, Pa., and in 1863 he was called to the pastorate of the Presbyterian Church in Aurora, N. Y. When Mr. Wells, so famous as the founder of the great express company of Wells, Fargo & Co., resolved

to purchase the buildings erected for a Masonic College at Aurora, and transform them into a Female College which would largely endow, he took his pastor, Rev. Dr. Howard into his confidence, and after consulting him at every step, asked him to become the president of the college. Howard sustained this double duty of College President and pastor until his death. He was an admirable teacher, winning the affections of his pupils while he curbed the over-eagerness of the ambitious, and stimulated the dull to exertion.

On the same day, July 1st, Rev. SAMUEL JOSEPH MAY, whose illustrious record as a reformer and philanthropist has unjustly obscured his excellence as a teacher, died at Syracuse. Mr. May was born in Boston, in 1798, a descendant of the Sewells and the Quincys, so conspicuous for their patriotism in the Colony and State of Massachusetts. He graduated from Harvard College in 1817, studied divinity, and was ordained as a Unitarian minister in 1823, and settled at Brooklyn, Connecticut, at Syracuse, N. Y., North Scituate, Mass., and again at Syracuse. For some years he was General Agent for the Massachusetts Anti-Slavery Society, and received the ill-treatment so impartially meted out by the mobs to Anti-Slavery lecturers in those days. In 1842, Hon. Horace Mann, then Secretary of the Massachusetts Board of Education, prevailed on him to take charge of the Female Normal School at Lexington, Mass. He resigned in 1845, though he had been very successful, and became for the second time a resident and pastor at Syracuse. Here he was conspicuous for his zeal in all measures for educational improvement, urging the adoption of the best methods, the best apparatus, and the best teachers in the public schools. He took a prominent part in securing the location of the N. Y. Asylum and School for Idiots at Syracuse, and on the laying of the corner stone of the building made a most eloquent and touching address. His interest in all educational matters continued to his latest hour, and to him Syracuse owes in a great degree its high position in the matter of education. He was a writer of great force and eloquence, and some of his books will long survive him.

On the 2nd of July, Rev. ALFRED CHESTER died at Elizabeth, N. J. He was a native of Wethersfield, Conn., graduated from Yale College in 1818, studied theology and was settled about 1823, as pastor of a Presbyterian church in Rahway, N. J. In a year or two he removed to Morristown, N. J., where for fourteen years he conducted a boarding school of high grade. A man of large culture, of fine scholarship, of great devotion to letters and teaching, he moulded successfully the minds and characters of the young who came under his tuition. After some years abstinence from teaching, in consequence of impaired health, he again resumed it, but his later years were spent rather in the promotion of education than in the actual work of teaching.

On the 8th of July, Rev. JOHN W. FRENCH, D. D., chaplain of the U. S. Military Academy at West Point, and Professor of Geography, History, Ethics and Law, there, since 1856, died at West Point, aged about 61 years. He was a native of Connecticut, was educated at Washington (now Trinity) College, Hartford, Conn.; studied theology at the General Protestant Episcopal Seminary, N. Y. City; was admitted to Holy Orders in 1835; became a Professor in Bristol College, Pa., in 1836, and some years later rector of a church in Portland, Me., and then of the Church of the Epiphany, Washington, D. C. In 1856 he was appointed Chaplain of the Military Academy, and Professor of Geography, History, and Ethics, and to these branches Constitutional and International Law. His health had been failing for two or three years past, and he resigned a short time previous to his death.

Mrs. ABIGAIL P. GOODELL, widow of the late Rev. William Goodell, D. D., long a missionary in Syria, died in Philadelphia, July 11th, in her 72nd year. She was a native of Holden, Mass., had received an excellent education; married Mr. Goodell in Nov. 1822, and sailed with him for Syria, Dec. 9, of the same year. She had shared during nearly fifty years with her husband, the toils, dangers, and exposures of the missionary life, and had for a large portion of that time, been actively engaged in teaching the



Syrians, and especially Syrian women and girls, the elements of learning and the rudimentary truths of Christianity.

On the 12th of July, HORACE WEBSTER, LL. D., many years Principal and President of the Free Academy or College of the City of New York, died at Geneva, N. Y., aged 73 years. Dr. Webster had spent over fifty years of the work of instruction. He was born in Vermont in 1814, entered the Military Academy from that State in 1814, graduating in 1818, fourth in his class, and being immediately appointed assistant professor of Mathematics, and promoted to be First Lieutenant 3rd Infantry in 1820. In 1825 he signed to accept the professorship of Mathematics and Natural Philosophy in Geneva College, N. Y., which he held till 1848. On the organization of the Free Academy in New York in 1848 he became its Principal, and when it received a charter as a College he was retained as President, but resigned in 1869 in consequence of failing health, after twenty years of constant labor as an instructor. While in the Free Academy he was Professor of Moral and Intellectual Philosophy as well as Principal, and in 1852 the department of Political Philosophy was added to his chair. He received the honorary degree of L.L. D. from Kenyon College, Gambier, O., in 1842, and from Columbia College, N. Y., in 1848, and that of M. D. from the Univ. of Pennsylvania in 1852.

July 20th, Rev. FREDERICK W. BERGH, D.D., LL.D., Professor of Didactic and Polemic Theology in the New Brunswick Theological Seminary, died in New Brunswick, N. J. He was born in Antigua, in 1812, his father being a Moravian missionary. He was educated in the Moravian schools in England, and after 1825 in that at Nazareth, Pennsylvania, where he graduated about 1830, and subsequently taught chemistry in the same collegiate school. In 1835 he entered the ministry, first in the German Reformed and afterwards in the Reformed (Dutch) Church, being a pastor in Philadelphia from 1835 to 1860, when he was elected Professor of Didactic and Polemic Theology and acting President of the Reformed (Dutch) Seminary in New Brunswick, having also a lecturing professorship in Rutgers College. He was a man of vast erudition, and great administrative abilities.



and by his kind and genial manners had won the affection and regard of his students and of all who knew him.

On the 24th of July, died GEORGE H. MILES, A. M., a poet and dramatist, Professor of Belles Lettres in Mt. St. Mary's College, near Emmitsburg, Md., died at Thornton, Md. He was born in Baltimore, Md., in 1824, educated at Mt. St. Mary's, and had been for some years Rhetorical Professor there. He had published several poems and dramas on historical and religious subjects.

In July also died Rev. MELANCTHON JACOBS, D. D., for forty years a Professor of Mathematics and Chemistry in Pennsylvania College at Gettysburg, Pa., aged about 70 years. Professor Jacobs was a Lutheran clergyman of great learning and considerable eloquence, an able writer, not only on professional subjects, but throughout a wide range of literature. His "History of the Rebel Invasion of Maryland and Pennsylvania, and the Battle of Gettysburg," is in every respect the clearest and best description of the campaign which culminated in Gettysburg, that has yet been written.

On the 8th of August Rev. NATHANIEL S. S. BEMAN, D.D., LL.D., died at Carbondale, Illinois, aged 86 years. Dr. Beman had not only been in his younger days a practical educator, but throughout his whole life was a zealous promoter of education. He was born in Lebanon, N. Y., educated at Middlebury College, from which he graduated in 1807, and after a full course of theological study, was for two years a pastor in Portland, Me. He then went to Georgia, where he established a flourishing High School, and exerted so powerful an influence in behalf of education in the whole region, during his ten years' residence there, that forty years later the people talked of Beman's schools. In 1822 he came to Troy, N. Y., and there for forty years his word was law. A kingly man among men, he used his power beneficently and for the promotion of all good objects; and it is not too much to say that the flourishing educational condition of Troy to-day is due largely to Dr. Beman's influence. He resigned his pastorate in 1862, and had since passed his time mainly in the families of his children.

## GEOGRAPHICAL NOTES.

UNITED STATES.—Stephen Powers, in the form of a series of graphic letters to the *Railroad Gazette* (Chicago, Mar. 23) describes the valley of the Rio Grande from Fort Quitman to Mesilla. For a distance of 60 miles above the former place, he says, "the bottoms on both sides together will not average above a quarter of a mile in width from San Eleazaro to Franklin (El Paso), where the Mexican settlements are scattered along, they are twice or thrice as wide. From these mere ribbons of bottom-lands the slopes easily up to the sierras, eight or ten miles back to a gravelly *mesa*, covered with *chaparral*, and totally worthless except for its mesquite beans." The river with its "thick argillaceous porridge—its rich blood-pudding"—"bound by dust, and that dust by desert gravel, and that gravel by sierras,"—he likens to a Nile in an Egypt twenty rods wide with a Sahara twenty miles wide." The likeness holds further:

"It is astonishing what a dense population these narrow threads of bottom-lands sustain where cultivated, even in the wretched Mexican fashion. From San Eleazaro to Franklin we passed a number of villages and hamlets, each straggling along the road from a quarter to half a mile, and swarming with people. This is on the Texan side alone, and on the Mexican side it is much the same, only more are gathered into one town, El Paso. There is little of that celebrated town but one street; yet that is said to be several miles long! After crossing that dreadful desert of the Llanos Estacados, one is surprised at the antiquity of the civilization here; the settled and routine appearance of things; the pudgy little whitewashed cathedrals full of dark-eyed maidens in gaudy bodices and mantillas; the quaint and quiet simplicity of these utterly unsophisticated villagers; the enormous garden walls of adobe, the harem-like and Oriental appearance of some of the inclosures; the teeming gardens. Indeed when we passed through one of these hamlets at the time of the midday siesta, I was forcibly reminded of Pompeii, so quiet was it between the low, dead, windowless walls, in the narrow shaded streets, with no one in sight save here and there an old hag perched like a witch on the corner of her flat roof watching lest some of our rough scamps, indescribably

gry for vegetables, should vault over and pluck her onions. And the strangest thing of all is, that this civilization has been here so long, even centuries, and yet any day the yelling Apaches may swoop like fiends through the single street of some exposed hamlet, in broad mid-day, and carry off captives and cattle with impunity; that is, with impunity, were it not for the United States soldiers."

"The explanation of this populousness must be sought in the extraordinary fertility of the river-flats, and the facility with which they can be irrigated. The Rio Grande is scarcely less infallible than the Nile in its annual swelling and recession, and is at its highest when most needed. Rising so near the level of its low banks, the water is easily carried out over the fields in earthen aqueducts (not ditches), from which, wherever tapped, the water flows down between the long rows of maize. Rich as they now are, these flats will need no manuring forever, for the water is laden with silt. I never saw any water which is so thick and soup-like; it is said to be the heaviest water on the continent, not excepting that of the Mississippi."

Mr. Powers's journeying was in relation to the Southern route to the Pacific, and he predicts that on the completion of the Texas Pacific Railroad to El Paso, if it has also built a branch to Lavacca, the port of San Antonio, "a great part of the goods for the Rio Grande valley, as far north as Fort Selby, will come *via* the Gulf," whereas they now come overland from St. Louis.

—The U. S. Survey of the Great Lakes was begun in 1839, but the trigonometrical survey not till 1849. The surveys of Lakes Superior, Huron, St. Clair, and Erie, and the connecting rivers, are completed; those of Lakes Michigan and Ontario will be completed during the next two years. The earliest surveys of these waters were made by Lieut. Bayfield, R. N., on behalf of the British Government, and were wonderfully full and correct considering the time and means at his command.

SOUTH AMERICA.—Paraguay and the allied powers who overcame her have not yet concluded a definitive treaty of peace. The long delay which has taken place is due to the fact of the occupation by the Argentine Confederation of the Gran Chaco—a large territory lying along the west bank of the Paraguay River, like a wedge between Para

guay and Bolivia, who both lay claim to it. Brazil, wearied by Paraguay's procrastination, undertook to negotiate a treaty without her ally, whereupon the Confederation formally confirmed its occupation of the Gran Chaco, and made Villa Occidental the capital. This town was surveyed by Mr. Edward Hopkins as the starting point of a projected railroad to Potosi, (see the MONTHLY for April).

—One of the results of his surveys on the Madeira is that Mr. Geo. E. Church, the engineer, is thus described by himself in *Harper's Monthly* for March :

"Since the surveys of the Madeira rapids have been finished, a considerable number of Bolivians from Mojos and Trinidad have settled along their line, to tap the rubber-trees, which are found in great abundance on both sides of the river. The following description will give an idea of the process used there in preparing the gum for market. The sap, or milk, of the tree has been received in an inverted turtle-shell. An earthen jar, with a hole in the bottom, sits over a palm-nut fire, the smoke ascending through the jar. A Bolivian Indian sits near; he dips a paddle in the milk, and holds it over the smoke until the gum is hardened, then dips it again, and again hardens it over the jar. The process is continued until the end of the paddle is covered with the proper commercial thickness. The gum is then cut off and is ready for market. A good day's work is six pounds. The rubber product of the Amazon Valley is increasing with great rapidity. That for 1870 was correctly estimated at 5,760 net tons, and once the lands of Bolivia are penetrated, this figure will be very largely increased. In Northern Bolivia, especially upon the Monu-tata river and the western branches of the Beni, are vast groves of rubber-trees almost untouched. The border lands are of exceeding fertility and health, and are destined, ere long, to attract much attention.

EUROPE.—Recently published accounts of the soundings made in the Baltic last summer, by an expedition organized by the Russian Government, show the depth of that inland sea to be gradually diminishing from west to east. It varies from 100 to 180 fathoms. To the north of the island of Gotland there is so little salt in the water that it is potable.

—Elisée Reclus, the well known geographer, author of "*La Terre*," who served in the ranks of the Commune against the Versaillists, and was sentenced to transportation to a French penal colony, has, by the united efforts of

of science, had his sentence commuted to simple banishment from France. Some interesting particulars in regard to him will be found in No. 350 of the *Nation* (March 14), in a letter from the geologist Jules Marcou.

OCEANICA.—Advices from Australia to Jan. 20, report the completion of the Queensland line of Telegraph from Brisbane to Norman River, a distance of 1,455 miles. Brisbane is situated near the exact middle of the east coast, while Norman River is one of the larger of the numerous rivers flowing north into the Gulf of Carpentaria. There now only remains the stretch from Normantown to Port Darwin—the terminus of the Java Cable—to bring Australia into telegraphic communication with all parts of the world. The South Australian overland telegraph is now open 1,100 miles from Adelaide. The objective point of this also is Port Darwin, and it will be 2,400 kilometres (1,500 miles) in length. The country traversed by it is almost a virgin wilderness.

AFRICA.—Dr. Schweinfurth, the African traveler and botanist, has returned safely to Europe, though with the loss of the greater part of his invaluable collections and drawings. He has brought back a harvest of information and experience which places his journey among the most successful of modern times. After his great journey west of the Upper Nile, in the country of the Niam-Niam and Monbuttu, he made a short excursion from his headquarters, the Seriba Ghatta, westward to Kurkur and Danga, positions formerly visited by Petherick, and returning planned a much more extended journey, when a fire broke out in the Seriba Ghatta, on the 2nd of December, 1870, which not only destroyed the station but with it the whole property of the traveler. Fortunately a portion of his collection was at that time already on its way to Berlin. Provided with a few necessities at Seriba Siber, the headquarters of the Egyptian troops, the indefatigable traveler made a tour in a part of Fertit hitherto unvisited by Europeans, from December 1870 to February 1871, during which he found that the Bahr-el-Arab is unquestionably the main stream of the basin which mouths in the Nile at the Bahr-el-Ghazal. Having been deprived by the fire of every instrument by

means of which any mechanical reckoning of the distance traversed during this journey could be made, the explorer, with an energy perhaps unexampled, set himself the task of counting each step taken, and in this way constructed a satisfactory survey of his route. He states that the Niam are firing their woods in order to exterminate the elephant, thinking thus to rid themselves of the visits of the hunters. These people and the Monbuttu are cannibals, and a plump traveler is in great danger in their country.

—Sir Samuel Baker is not so much lost as the public have imagined when it sent out a correspondent in search of him. Two letters have been received from him, dated October 19 and 20, 1871, at Gondokoro, henceforth as a dependency of the Khedive, to be called Ismailia (Lat.  $4^{\circ} 55' N.$ ). Six months had been spent in digging and cutting a passage for his expedition through the arm Bahr Giraffe, the Nile being closed. This was a stupendous undertaking, and cost not a few lives. His arrival at Gondokoro was a relief from the peril for hostilities on the part of the Baris tribe, who had promptly beaten and reduced to a quasi-loyalty. The confederates of the slave-traders of that region are now at bay. Samuel's force consists of 1,035 troops, including ten companies of regulars. He was expecting a reinforcement of 800 men before proceeding southward.

—Holland has ceded to Great Britain her colony of the Gold Coast of Africa, so that now one flag covers the territory from the Gambia to Lagos. The transfer was distasteful to the Dutch people, one newspaper even protesting against the announcement of it within a mourning border. The treaty, besides some pecuniary equivalents, obtains for Holland the right to extend her possessions at will over the island of Sumatra, and to procure free laborers from the colonies with the same facilities which British colonies possess.

—Dr. Petermann has revived in his *Mittheilungen* the theory broached five years ago, that the Ophir of Scripture is to be found in Southern Africa. His authority for this, then, is Karl Mauch, the German traveler, who since 1864 has been traversing all parts of Africa south of the Zambesi, and who in 1867 discovered extensive gold deposits to the

of the Transvaal Republic, near the 17th parallel and about 450 miles N. E. of Sofala in Mozambique. Last autumn he also found alluvial gold in the neighborhood of a ruined city, Zimbabwe, lat.  $20^{\circ} 14'$  S., long.  $31^{\circ} 48'$  E., about 200 miles due west of Sofala. This region, which has been previously visited by missionaries, has an altitude of about 4,000 feet above sea-level, is well watered and fertile, and inhabited by a peaceable and industrious tribe of the Makalaka, given to agriculture and cattle-raising. The ruins consist of walls 30 feet high, 15 feet thick, and 450 feet in diameter (German measure), a tower, etc., all built of granite without cement. Three days journey to the northwest of Zimbabwe still other ruins are said to exist, of a like antiquity—how remote is the question. Herr Kiepert, less enthusiastic, speaks lightly of this *rechauffé* "Portuguese fable four centuries old," and says that the philological test applied 25 years ago settled the dispute in favor of India. The Old Testament names for the products of Ophir are scarcely altered Sanskrit words, and Ophir itself is to be identified with Abhira, the lower Indus region, whose trade was anciently with the mouth of the Euphrates. Captain Beke, on the other hand, writing to the *Athenæum* of March 16, considers the Scriptures the only guide, and that "the mention of Ophir in conjunction with the Arabian countries of Havilah and Sheba, ought to be conclusive that Ophir itself was in Arabia likewise." Capt. Beke had seen drawings of some of the ornaments on the ruins of Zimbabwe, and seems to think the Arabs might have been the authors of these constructions, contrary to Petermann's decided opinion. Herr Mauch has undertaken a new journey to Manica, between the Limpopo and Zambesi Rivers. Diamonds have been discovered in various parts of the north and northwest of the Transvaal Republic.

ASIA.—The Geographical Society of St. Petersburg has had soundings made of the Siberian Lake Baikal. In the southwest corner was found the greatest depth—4070 feet (1248 metres).

—The most interesting explorations, apart from Palestine, now going on in Asia, are those at Troy and Ephesus,



in Asia Minor. Dr. Heinrich Schliemann is at work amid traces of Achilles and Priam, and has derived great courage from his extensive excavations, though he thus far found chiefly stone implements and pottery. When interrupted by the cold weather he had come upon well built of immense stones, sustaining structures of a much more fragile character. As for Mr. Wood, at Ephesus, he appears to have laid bare part of the famous Temple of Diana, finding columns six feet in diameter, sculptured in relief as Pliny related. Considerable statuary has been unearthed but apparently not of a high order. The British Museum which has assisted Mr. Wood to some extent, will be the gainer by his discoveries.

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### EDUCATIONAL INTELLIGENCE.

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NEW YORK.—The recent report of State Superintendent Weaver, to the Legislature, is in the same clear style which we have before commended. His report may not be the largest State report published, but it gives more information than we are in the habit of finding in similar reports. Our space permits us to present only a synopsis. There are several valuable articles on live educational topics which we shall reprint during the summer.

The total number of school houses is 11,728.

The reported value of school houses and sites in

|                          |                 |
|--------------------------|-----------------|
| cities .....             | \$14,606,903 00 |
| In rural districts ..... | 8,861,363 00    |

|                       |                 |
|-----------------------|-----------------|
| Total for State ..... | \$23,468,266 00 |
|-----------------------|-----------------|

The amount spent for school houses, out-houses, site fences, furniture and repairs, during the year, was \$1,590,060.93. Nearly \$10,000,000 have been expended for building and improvements during the last five years, or more than three times the amount expended for that purpose in an equal period preceding.

The whole number of children between the ages of five



and twenty-one years, as reported, was 1,502,684. The number attending public schools during some portion of the school year was, 1,028,110, a gain of 78,000 since the adoption of the free school law in 1867. The attendance, including normal, academic, and private schools, was 1,202,927, or 80 per cent. of the entire school population of the State. Schools were maintained for an average period of thirty-two weeks and four days. The average attendance has increased seventeen per cent, and the length of school terms seven per cent. since 1867.

The whole number of teachers employed during any portion of the school year was 28,254. The number employed at the same time for twenty-eight weeks was in cities 4,752, and in rural districts 13,119, making a total of 17,871. The amount paid for teachers' wages was:

|                         |                       |
|-------------------------|-----------------------|
| In cities.....          | \$3,066,787 94        |
| In rural districts..... | 3,586,305 11          |
| Total.....              | <u>\$6,653,093 05</u> |

This is an increase of more than, \$2,000,000, or 50 per cent. in five years.

The total amount expended for the support of public schools, during the year, as reported, was \$9,607,903.81. The entire amount expended during the year for public educational institutions, not including appropriations made to orphan asylums and other public charities in which instruction is given, was:

|                                                   |                       |
|---------------------------------------------------|-----------------------|
| For teachers' wages.....                          | \$6,653,093 05        |
| For district libraries.....                       | 63,505 38             |
| For school-apparatus.....                         | 195,036 63            |
| For colored schools.....                          | 73,232 59             |
| For buildings, sites, furniture, repairs, &c..... | 1,594,060 93          |
| For other expenses of common schools.....         | 1,028,788 47          |
| State appropriation for academies.....            | 43,144 58             |
| State appropriation for teachers in academies...  | 14,289 64             |
| For teachers' institutes.....                     | 20,571 37             |
| For normal schools.....                           | 116,206 44            |
| For Cornell University.....                       | 32,000 00             |
| For Indian schools.....                           | 7,816 96              |
| For Department of Public Instruction.....         | 18,536 49             |
| For Regents of the University.....                | 6,107 53              |
| For registers for school districts.....           | 13,795 00             |
| Total for 1871.....                               | <u>\$9,880,185 06</u> |
| Corresponding total for 1870.....                 | 10,209,712 09         |
| Decrease.....                                     | <u>\$329,527 03</u>   |

## APPORTIONMENT OF SCHOOL MONEYS.—1872.

The school moneys, for the fiscal year ending Sept. 1872, are derived from the following sources:

|                                         |                |
|-----------------------------------------|----------------|
| From the Common School Fund.....        | \$170,000 00   |
| From the United States Deposit Fund.... | 165,000 00     |
| From the State school tax.....          | 2,416,672 37   |
|                                         | <hr/>          |
|                                         | \$2,751,672 37 |

The apportionment has been made as required by law follows:

|                                                       |                |
|-------------------------------------------------------|----------------|
| For salaries of school commissioners.....             | \$90,400 00    |
| For supervision in cities.....                        | 18,500 00      |
| For libraries .....                                   | 55,000 00      |
| For Indian schools.....                               | 3,147 42       |
| For district quotas .....                             | 860,928 45     |
| For pupil and average attendance quotas.....          | 1,721,856 90   |
| For separate neighborhoods from Contingent Fund ..... | 114 65         |
| For balance of Contingent Fund.....                   | 1,724 97       |
|                                                       | <hr/>          |
|                                                       | \$2,751,672 37 |

THE NEW YORK STATE TEACHERS' ASSOCIATION, two seventh annual meeting, will be held at Saratoga Springs, July 23, 24, 25, 1872.

CALIFORNIA.—*Educational Legislation.*—The provisions which the late Legislature has made for education, may be summed up as follows:

|                                                                    |              |
|--------------------------------------------------------------------|--------------|
| For State University Building.....                                 | \$300,000 00 |
| For current expenses of University \$6,000 per month, 2 years..... | 144,000 00   |
| For completing State Normal School Building                        | 150,000 00   |
| For support of State Normal School.....                            | 30,000 00    |
|                                                                    | <hr/>        |
| Total.....                                                         | \$624,000 00 |

The General School Law has not been changed, except by a few amendments incorporated in the Code. The order of the Superintendent of Public Instruction must be removed to Sacramento.

The attempt to legislate out the Deputy Superintendent of San Francisco, made at first in the Code and next in the Tuttle bill, was defeated. So, also, the attempt to kill the State Educational Journal, and to fasten the present system of school text-books on the State for eight years. When the Code goes into effect, in January, 1873, all incorporated towns and cities will be free to adopt their own books. The book ring, which cost the State last year \$200,000, is broken.

The new school law of San Francisco will give the school department a fair amount of revenue.

The Compulsory Educational bill, which passed the Assembly by a strict party vote—with the exception of Wilcox and Luttrell (Democrats), who voted for it—provided that children between 5 and 13 years of age should attend some school, public or private, for *half* the time that a public school should be kept in the city or district where the children reside. It provided for separate schools for African or Indian children, except that, in case of failure to establish separate schools, said children should attend any public school. This bill went to the Senate Committee on Education, Tuttle, Chairman, and was there smothered. The Democratic party stands squarely committed against compulsory education, with or without colored children. S.

GEORGIA.—The Sixth Annual Meeting of the GEORGIA TEACHERS' ASSOCIATION is fixed for April 30, and May 1, and 2, at Augusta. Dr. Lipscomb is the President, B. Mallon, Secretary. The exercises announced are extended and varied. Without doubt the meeting will be interesting and profitable. Special arrangements have been made for hospitable entertainment of members of the Association by the citizens of Augusta; and the railroads will furnish free return tickets.

SAXONY.—A novel and most interesting experiment in the field of elementary instruction has just been resolved upon in Saxony. Hitherto, as everywhere else, so in that small but highly-developed kingdom, the youth of the lower orders, upon being apprenticed to a trade, have been left at liberty to forget the little they have learned at school. Attendance at Sunday schools and evening instruction provided by the State and charitable societies was perfectly optional. By a law just passed this liberty is abridged, and compulsory attendance at evening schools exacted for a period of three years. This is the first time, if we are not mistaken, in the annals of world, that an attempt has been made by a State to extend the education of the humblest classes beyond the merest rudiments, and after they have entered upon the business of life. Saxony, already the best taught portion of Germany, will by the new law be more than ever in advance of her sister States.

## CURRENT PUBLICATIONS.

DR. HART'S little book <sup>(1)</sup> is sufficiently elementary, for, like one of the grammars, the first chapter commences with—"What is your own name?" A little farther on we have—"What is the name of the town or city that you live in?"—forgetting that, as the majority of mankind of necessity cannot live in towns, such a question must be an absurdity. "Write the names of five other places that you have seen." Thousands of pupils have never seen such "other places."

Without having exact views on the subjects he pretends to discuss, there is a pretention to exactness in arrangement and a formal use of varied typography, particularly in his *Rhetoric*, which may deceive superficial observers. We are told that "The name of any *person* is called a Noun."—Several paragraphs on, the sentence is repeated with *place* and afterwards with *thing*, instead of *person*. Arriving at this point, he seems to have thought that one sentence might have included all this, when he adds—"A noun is the name of any person, place, or thing."

Chapter I is devoted to "Simple Words," and Ch. II to "Derivative Words," and we find *farmer* among the former and *worker* among the latter. Although the book is "neither an Etymology nor a Grammar," an entire page is sprawled over to explain the use of the suffix *er*, or *or*, commencing with the word *Examples*, when the reader asks *of what?*—because nothing has preceded to require them. He thus uses the word—

"EXAMPLES.—From *build* we form the word *builder*. From *create* we form the word *creator*. (p. 20.)

"DIRECTION.—Write the words ending in *er*, or *or*, which are formed from the following:

viz.: *bake, visit, act, &c.*, ten words in two columns, followed by a note on the variation in spelling *er*, *or*, when the lesson is apparently closed by a dash in the middle of the page

(1) FIRST LESSONS IN COMPOSITION. By John S. Hart, LL.D., Principal of the New Jersey State Normal School, etc. Philadelphia: Eldredge & Bro. 1872.

nothing having been said about the meaning of *er*. Then follows—

“EXAMPLES.—Believe, believer; run, runner; accept, acceptor.

“DIRECTION.—Write ten similar pairs of words,” &c.

Another divisional dash, and still not a word as to the value of *er*. We then have another trial—

“EXAMPLE.—*Actor*; one who acts, a doer. (p. 21.)

“NOTE.—The letters *er* or *or* added to a verb, generally mean ‘one who.’”

We have now another DIRECTION to give two meanings (on the model of those to *Actor*) to words like *writer*, *driver*, &c., when a similar dash to the others follows, although the next lesson is on forms like *truc*, *truth*, where “the letters *th* mean,” &c. *Letters* indeed! as if suffixes were not parts of words and of speech, with the formation of which, letters (or ‘marks of sound’) have nothing to do. On p. 22, the pupil, who is given *length* from *long*, is asked to give the corresponding derivatives of *slow* and *young*.

By the time that page 55 is reached, the “scholar” can

“Make up ten sentences or more on each of the following subjects:”

Dolls, Tops, Hoops, Marbles, Pussy in the Corner, &c. On page 80 some synonyms appear, as *custom*, *habit*; *silence*, *stillness*; but the author himself confounds *scholar* and *pupil*, and judging from his *Rhetoric*, he seems to prefer the indefinite word *Word-book* to the definite term Dictionary. On page 82 he mentions an apparatus for pulling boats through the *locks* of a canal by steam. Boats cannot be pulled *through* locks: they are pulled *in*, the level of the water is then changed, when they are ready to be pulled *out* at the other end.

Of five subjects for composition on page 94, three are on *advice*—viz. 2. Pussy’s counsels to her kittens. 4. A girl’s advice to her dolly [a nursery word], &c. 5. The hen’s advice to her chickens, &c. Four pages further on—such is the efficiency of the book and the improvement of the pupil, that she can write on The importance of commerce, The importance of agriculture, &c.; and on page 100, on The Suez Canal, and The Gulf Stream.

At page 107, the pupil who was recently writing “A dia-

logue between two dollies," is treated to an *essay* on Punctuation, extending to about *forty pages*! seemingly added to enlarge the volume, for they are beyond the reach of pupils whose knowledge has been acquired from this book.

We had marked other objectionable or inaccurate points in this feeble volume, and we call attention to the fact that works on "American Literature" and "English Literature" by John S. Hart, LL. D., are announced as in preparation—subjects requiring a sounder scholarship than Dr. Hart seems to possess. Indeed, it is a mystery how such authors get their literary degrees, and the control of the education of a respectable State like New Jersey. W. S.

A CRITICAL reading of Campbell's Concise School History of the United States (\*) has proved to us that the work is unusually exact. It is evident that the author has not taken authorities at second hand, when he was able to consult the original documents. His little book from the beginning to the end bears the marks of conscientious research and scholarly labor. The style is clear and flowing, and the facts are presented in a manner that cannot fail to interest the learner. It is always pleasant to read a book, written, as this is, in good Anglo-Saxon English. Of all the School Histories that have come under our notice, this meets most nearly the requirements which, in our opinion, are essential to a good School History.

THE MESSRS. HARPERS have published the third volume of "The Life and Times of Lord Brougham," written by himself. Also, a very interesting work entitled "Ancient America, in notes on American Archæology," by John D. Baldwin, author of "Pre-Historic Nations." It has 300 pages, with many illustrations.—Of Miss Mulock's Works, another volume, "The Woman's Kingdom," 456 pages illustrated.—Volume II of the "Life and Times of John Wesley, 618 pages with portrait.—Another of the household edition of the works of Charles Dickens, "Martin Chuzzlewit," with 59 illustrations.—"The First German Reader, to succeed the First Book in German," by George

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(\*) CAMPBELL'S CONCISE SCHOOL HISTORY. Brewer & Tileston, Publishers.

F. Comfort. "The Complete Phonographer," an inductive exposition of Phonography, with its application to all branches of reporting. It is also intended as a school book. By James E. Munson.

MESSRS. J. B. LIPPINCOTT & Co., have published "Sanford's Primary Analytical Arithmetic."

MESSRS. DODD & MEAD have published three more excellent little books: "Bede's Charity," by Hesba Stretton; "Bible Lore," by J. Comper Gray; and volume third of "The August Stories."

MESSRS. E. H. BUTLER & Co., have just published "The New American Primary Speller," to accompany Sargent & May's New American Readers.

MESSRS. WILLIAM WOOD & Co., have issued a fully illustrated volume which they name "The Amateur Microscopist, or Views of the Microscopic World." It is a handbook of microscopic manipulation and microscopic objects, by John Brocklesby.

"THE NORMAL DEBATER," designed for the use of schools as well as a guide for Teachers' Institutes and business meetings in general, by O. P. Kinsey, has been published by J. Holbrook & Co.

DR. JOSEPH MUENSCHER has published a learned "Introduction to the Orthography and Pronunciation of the English Language."

"HALF-HOUR RECREATIONS IN POPULAR SCIENCE." No. 2 treats on the "Cranial Affinities of Man and the Ape," by Prof. Reed Virchow.

THE STATE MICROSCOPICAL SOCIETY of Illinois has started a quarterly (of seventy pages) called "The Lens."

THE "SILENT WORLD," is a monthly periodical for the deaf and dumb, published at Washington, D. C.

A SIXTH EDITION of "The Origin of Species by Means of Natural Selection," has appeared in England.

"WHO WROTE IT? An Index to the More Noted Works in Ancient and Modern Literature," is the title of a book now in preparation, by William A. Wheeler, of Boston, author of a "Dictionary of the Noted Names of Fiction."



## MISCELLANEA.

PROF. PAUL CHADBOURNE has been elected President of Williams College, in place of Dr. Mark Hopkins, resigned.

PROF. LOOMIS, who has occupied the chair of Physics at Cornell University since last summer, has resigned on account of ill health, and is now with his father, Prof. Loomis of Yale College.

MR. EDMUND YATES and Mr. James Anthony Froude, prominent literary men of England, have engaged to lecture in this country during the ensuing autumn and winter.

DR. GUSTAVUS FISCHER is very closely engaged upon his second Latin book. After the completion of his Latin, we hope he may enter upon the preparation of a German series.

MISS M. J. YOUNG, the N. Y. Secretary of the "American School Institute," has recently sailed for Europe, to enjoy a brief respite from her arduous duties.

## PUBLISHERS' DEPARTMENT.

**The Riverside Press, Cambridge.** *First Steps in English Literature*, by ARTHUR GILMAN, A. M.: Hurd & Houghton, New York. This beautiful little volume of 230 pp., in limp covers, is truly *mutum in parvo*. The author says excellent things about our literature, and in a way that seems wonderful when compared with the usual dry compendiums that stand for text-books in this subject. He divides our literature into two grand periods, viz.: Immature English and Mature English, the point of division being 1538, on the accession of Elizabeth. He sub-divides each of these periods into four others; the last of these subdivisions extending from 1700 to 1870, which he calls the period of the People's Influence, he again divides into four parts. His plan seems to us a good one, and to be marked by sound philosophy. We think, with this volume, properly used as a text-book, the pupil will be led into this grand department of study by a pleasant and profitable path. For ourselves, we have placed the little volume on our shelf with the hand-books that are used for frequent reference. The price of the book is one dollar (\$1.00).

**The Normal Diadem** has just been introduced into the Public Schools of Brooklyn, N. Y. The deserved success of the *Diadem Series* of School Music books proves that the merits of some books may give them large circulation, and that "Agency work" and "wire-pulling" are not always necessary to make books sell.

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## SCHOOL HISTORIES AND SOME ERRORS IN THEM.

*By Samuel Abbott Green.*

THE number of School Histories of the United States has been increased within a short time by the publication of several new works. Each one doubtless has its own peculiar merit, and we think that any one of them is better than the histories of earlier days. Most of those books have entered largely into details. They faithfully recorded every minor conflict and delighted especially in the description of battles. We were told what the right wing of the army did and what happened to the left wing. The number of men engaged on each side was given, and the number of killed, wounded, and captured, was carefully recorded. Old histories delighted too in a formidable array of dates.

Our latest writers have not altogether reformed these errors, but they have taken some steps in the right direction. Too much space is yet given to battles and wars. Instead of naming every engagement, and giving the date of its occurrence, we should often prefer to say briefly, "after several battles," or, "after much fighting the decisive battle of the war was fought," or the like. By such conciseness we should gain room for something vastly more useful to the scholar.

The essential points of a good history for the school-room are, we think, a careful selection of important events and their narration in a direct, simple, but not childish style. The story should be told in an interesting manner, but concisely, and should be strictly accurate.

For a long time we have felt impelled to correct certain errors in fact, which have found place in our school histories, and have been handed down, some of them, for generations. We shall take the present opportunity to point out very briefly several of these errors.

All, or nearly all, the histories give 1620 as the year when negro slavery was introduced into Virginia. The correct date of its introduction is 1619. The original account, and the basis of all our information on the subject, is found in "A Relation from Master John Rolfe," which is contained in "The Generall Historie of Virginia," by John Smith, first published in 1624. Rolfe, after speaking of events that occurred earlier in the year 1619, says (p. 126), "About the last of August came in a dutch man of warre that sold us twenty negars." The mistake of putting the date one year later was first made by Beverly, who wrote a history of Virginia, which was published in London, in 1705, and succeeding authors have copied the error. Mr. Bancroft, in the last edition of his history, has made the proper correction.

The story of Captain John Smith and Pocahontas is now regarded as a fabrication, by all who have closely examined the subject. It was, without doubt, the invention of the great adventurer and story-teller Smith himself, made at the time Pocahontas was in England, and an object of great interest and curiosity to the English people.

Recent investigations place Edward Maria Wingfield, the first president of the Virginia colonists at Jamestown, in a different light from that in which he has generally been considered by historians. They have almost without exception called him hard names—a knave, an embezzler of the public stores, &c. He has, in truth, been condemned upon the evidence of his enemies. Wingfield himself wrote an account of the first doings at Jamestown, but the narrative was never published till it was edited a few years since

by an able historical critic, Charles Deane, LL. D., who came to the conclusion that Wingfield was, at least, as unselfish as any one of the Council. This body then consisted of only three members besides himself—Smith, Martynn, and Ratcliffe. These three one day came to the President's tent with "a warrant subscribed under their hands, to depose the President." They did depose him and kept him a prisoner on board 'of the Pinance. Ratcliffe was made president. The charges that were brought against Wingfield were exceedingly frivolous. The following is a specimen :

"First Master President [Ratcliffe] said that I had denyed him a penny whitle [small pocket-knife], a chickyn, a spoonful of beere, and serued him with foule corne." . . . .  
 Answer of Wingfield: "No penny whitle was asked me, but a knife, whereof I had none to spare. The Indyans had long before stoallen my knife. Of chickins I never did eat but one, and that in my sickness. Mr. Ratcliffe had before that time tasted of 4 or 5. I never denyed him (or any other) beare, when I had it. The corne was of the same we<sup>ch</sup> wee all liued vpon."

In Worcester's School History the following statement is made: "In 1584, the celebrated Sir Walter Raleigh, under a commission from Quéen Elizabeth, to discover, occupy, and govern remote, heathen, and barbarous countries, . . . arrived in America, entered Pamlico Sound, and proceeded to Roanoke Island, etc." (p. 259). This paragraph has been taught for more than twenty years. Sir Walter Raleigh never came to or saw any part of what is now the United States, and at the time mentioned he was in England, dancing attendance upon the Queen.

One history, lately published, which we have at our hand, says in regard to the Maryland Charter, that "by it equality in religious rights and civil freedom was (*sic*) guaranteed to all emigrants;" all of which is untrue. The Charter made no provision for religious liberty or civil freedom.

The school histories inform us that in 1622, a grant of the land between the rivers Merrimack and Kennebec, was made to Gorges and Mason, and called Laconia. The Laconia grant was not made in 1622 but in 1629, and Laconia in the writing was described as "all those lands and coun-

tries bordering upon the great lake, or lakes and rivers known by the name of the River and Lakes, or Rivers and Lakes of the Iroquios," meaning thereby Lake Champlain. It turned out to be an imaginary province. The agents of Gorges who came over, returned to England with a *non est inventa provincia*. The territory ceded by the grant of 1622, was, according to the charter, to be called the Province of Maine.

In Swinton's Condensed School History (p. 7), we are informed that John and Sebastian Cabot discovered the American continent at Cape Breton, in 1494. A few pages further on (p. 16), we read that "the North American Continent was first discovered by the Cabots sailing under the English flag in 1493," and again on another page, that "In 1494 (or 1497), the Cabots discovered North America at Cape Breton. (p. 22.) Here we certainly can take our choice.

The true statement is that the Cabots discovered the Continent in 1497. It is uncertain whether their first landfall was on the coast of Labrador or Cape Breton Island. Mr. Swinton relies upon a map discovered a few years ago in Germany, and said to have been made by Sebastian Cabot himself. It is asserted in the map that Sebastian Cabot made it in 1544, that is, about fifty years after the voyage. Who makes the assertion is not known. We have space only to say that any one who will read Dr. John G. Kohl's remarks in relation to this map must regard it as of no authority whatever in settling the date of the discovery of the Continent.

Lorenzo Pasqualigo, a Venetian merchant in London, wrote to his brothers in Venice, the letter bearing date August 23d, 1497, that "The Venetian, our countryman, who went with a ship from Bristol in quest of new islands, is returned, and says that seven hundred leagues hence, he discovered land, the territory of the Grand Cham. He coasted for 300 leagues, and landed; saw no human beings. . . . He was three months on the voyage. . . . The King of England is much pleased with this intelligence. The King has promised that in the spring [of 1498] our countryman shall have ten ships. . . . His name is Juan Cabot, . . . these English run after him like mad people"

Raimondo de Soncino, envoy of the Duke of Milan to Henry's Court in London, writes to his government, August 24th, 1497, that "some months ago, His Majesty [Henry VII.] sent out a Venetian who is a very good mariner, and has good skill in discovering new Islands; and he has returned safe."

Do not these letters show very conclusively that the Cabots made their first voyage in 1497? And this is but a small part of the evidence we could give in favor of that date.

In no less than three places in Anderson's Grammar School History of the United States, we are informed that on the 19th of July, 1779, Major Lee surprised the British Post at Paulus Hook (now Jersey City), and captured the garrison, consisting of 150 men. This gallant exploit did not take place on the 19th of July, but just one month later, on the 19th of August. Congress ordered a gold medal to be struck and given to Lee in honor of this daring deed. On this medal is a Latin inscription which closes thus: "In memory of the conflict at Paulus's Hook, Nineteenth of August, 1779." A full account of this mistake is found in the Historical Magazine for December, 1868.

We might keep on, but our space will not permit. These errors which we have indicated should be weeded out of the text-books. Historians should rely upon the best authorities and take care to represent them correctly. In this way alone can we hope to make of history something else than a "huge Mississippi of lies." It has been said that history is a conspiracy against truth, and sometimes it seems as if the assertion is not wholly without foundation. S. A. G.



A GOOD, finished scandal, full armed and equipped, such as circulates in the world, is rarely the production of a single individual, or even of a single coterie. It sees the light in one; is rocked and nurtured in another; is petted, developed, and attains its growth in a third; and receives its finishing touches only after passing through a multitude of hands.

## EDUCATION IN JAPAN.

## PART TWO.

TWENTY years ago, there were probably not twenty men in Japan who could read an English book. It is now sixteen years since Commodore Perry knocked at the doors of, and obtained admission into the hitherto secluded Sea Empire. England, after nearly girdling the world with her conquering arms, her civilization, and her language, clasped it by obtaining foothold in Japan. The English language is now the basis of the new education in Dai Nipon, and in spite of the belief of the conservators of the old learning, and of a high European authority, that "the Chinese written language is the palladium of Japanese nationality,"\* we believe that in course of time the Roman text and script will displace the Chinese symbol-writing, and English become the language of science and learning in Japan. A sketch of the progress of foreign studies in Japan, will show the preponderance of the English over other languages, which has obtained during the last sixteen years, and which for the future promises to increase.

After the bombardment of Kagosena, in 1863, by the British fleet, Prince Satsuma sent a number of young men to Europe to study. His example was followed by a number of princes, to such an extent that the old law forbidding the subjects of Japan to leave the country had to be rescinded. The sending and maintenance of young men abroad to be educated is now adopted as a definite policy of the Government, under the care of a distinct department. These young men are to return to Japan, to be teachers, interpreters, government officers, engineers, chemists, etc. They are selected from each province, according to its population, and in choosing them, the qualifications most regarded are, morality, diligence, and general ability. Each of these students is allowed \$1000 per year, in gold, and is expected to study diligently for a term of from four to seven years, varying with the object of study. The writer, who had the privilege of instructing some of the first who came to the United States, and has since, in Japan, had the pleasure of nominating his own students for appointment,

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\* Hofman's Japanese Grammar.



estimates roughly, but from good data, that of those who go abroad for long courses of study, at least three-fourths remain in the United States; while of those who study in Europe, one-half remain in England.

The number of English and American teachers in Japan constitute a large majority over those of other nationalities. The missionaries were the first, and still are the most influential teachers, and may be said to be the leaders of the new education. All of them have a greater or less number of private pupils, while the Government schools in Nagasaki, Yokohama, and Yedo, are under their care. Since all the Protestant missionaries, at present fourteen in number, are English-speaking men, it will not be wondered at that their language and ours has so extended in Japan. Schools of the Imperial Government have been established at Yedo, Osaka, Yokohama, Nagasaki, Nügata, and Miako. The largest school, called the "Imperial Japanese University," is located in Yedo. It consists of three colleges, the Medical, Chinese, and the school of Foreign Languages and Sciences. The Medical school employs at present two foreign medical professors, one an American, the other a German. The Chinese school has been closed for the last two years, and is likely to remain so. At the head of the School of Foreign Languages and Sciences, is the Rev. G. F. Verbeck, a missionary of the Reformed Church in America. This school has at present not less than 1000 pupils. It is divided into the French, German, and English departments. Between six and seven hundred pupils attend the English branch, and the remainder attend the German and French schools, with a majority in the former. In the English branch we find a professor of Chemistry and Physics, and six American or English teachers. In each of the other branches respectively, are two teachers of their respective languages. The foreign teachers are assisted by about one hundred native teachers, several of whom have been educated in Europe. In the Yokohama School, Rev. S. R. Brown, also a missionary of the Reformed Church in America, constitutes the foreign faculty of the institution. He has several assistants, and is a master of the Japanese language, having written a grammar and phrase-book, both of which are invaluable to a foreigner beginning to learn the unique lan-

guage of Japan. In Osaka foreign professors are employed in the Hospital, Scientific School, and Military School. These all are assisted by a corps of Japanese teachers, proportionably as numerous as those in Yedo. In Kioto an American and a Prussian gentleman teach their respective languages. The Nagasaki Government school is under the charge of Rev. Henry Stout, a colleague with Messrs. Verbeck and Brown. Besides these schools, the Imperial Government of Japan has in its employ nearly fifty foreign physicians, mining and civil engineers, military and naval instructors, etc. We know that nearly nine-tenths of these gentlemen speak the English language.

Meanwhile, the particular provinces are not idle. A sort of rivalry exists between the Central Government and the provinces, as to the excellency of their particular schools. The young men of Japan leaving their native towns flock to the capitals and sea-ports, not really for the sake of obtaining better education, but to behold the wondrous works of the foreigners, to move in the stir of their busy life, and to learn the languages and arts of these people, by actual contact with them. Our reason for believing that the interior schools, though smaller than in the large cities, are as good, if not better, is that the "adjunct professors" of the schools in, and near the foreign ports, were usually discharged merchants' clerks or "driftwood" from all seas; while the teachers secured by the princes in their own provinces were, with few exceptions, educated gentlemen, who were engaged when in their own countries, and who came to Japan for the special purpose of teaching. We are very glad to add, however, having our information direct from the officers in Yedo, that the policy of "picking up" foreigners in Japan, and making them "professors," is to be abandoned; and hereafter all foreign teachers will be appointed in, and brought to Japan from the countries in which they live.

But we must return to the provincial schools. Beginning with Satsuwā, the extreme southern province, and counting northward, no less than ten provinces have schools in which foreign instructors teach the Western sciences and languages. Some of these provinces have four foreigners, usually in the capacity of Physician, Military Instructor, Professor of the Sciences, and Teacher of language; the usual

number, however, is two—a Physician and a General Teacher.

Usually each foreigner is supposed to be a *teacher* of whatever branch of learning he may profess, and beside those who learn from him indirectly and in a general way, at least twenty or thirty come under his frequent and direct instruction.

To one accustomed to exact statistics in a land in which printing is universal, rough estimates are not very pleasant substitutes for definite truth. From considerable data and careful consideration, however, we should tabulate the present facts of education in Japan as follows :

|                                                                                                                                          |      |
|------------------------------------------------------------------------------------------------------------------------------------------|------|
| Number of Imperial Government schools, in which foreign languages or sciences are taught, not including Medical or Military Schools..... | 7    |
| Number of Scholars in the same.....                                                                                                      | 2000 |
| Number of Provincial schools, as above.....                                                                                              | 10   |
| Number of Scholars in the same.....                                                                                                      | 1000 |

These figures we believe to be below the actual truth, and to give but the merest idea of the study of foreign, and especially the English language in Japan. No account is here taken of the many private schools taught by Japanese teachers who have themselves been, more or less, instructed by English teachers; and the far greater number of those, who in connection with their medical or military instructor, learn to read English books, and thus become lovers, if not masters of our speech and science.

The limits of our paper forbid us to state the many other educational influences at work in this island empire. The translations of valuable works on law, agriculture, medicine, history, physical science, etc., are continually increasing; though the difficulty of translating works on exact science into such preëminently unscientific language as Japan is almost insurmountable, unless the Chinese vocabulary is liberally drawn upon. The Japanese, who are apt scholars in learning the "doctrine of nationalities," have their pride severely touched as the dawning of scientific knowledge reveals the poverty of their own language to express the ideas of science with that precision she demands. Professor Tyndall defines science as "the art of seeing the invisible." Certainly, to the Japanese, she opens the Gate Beautiful and bids him behold all things created anew; but,

though speaking a language perhaps as old as the Sanscrit, he is powerless to put his thoughts and his visions into speech. The Japanese language seems, to us at least, to be highly capable of development, but neglect for centuries by those to whom it was mother speech, but who thought, wrote, and studied in Chinese, it is not like the Chinese, highly cultivated, but rude and unpolished. A step in the right direction will be taken, when the Imperial Government carries out its projected purpose of compiling and issuing, under the auspices of the very best Japanese scholars a complete dictionary of the language, on a plan similar to that of the great German dictionary of the Brothers Gremin, or the still greater Imperial Chinese Dictionary. "The longer you live in Japan, the less sure you will be of anything you hear," was said to us a few days after we landed in Yokohama—by a disappointed office-seeker—and perhaps the report concerning the dictionary aforesaid is "premature" by many years. In any case it is a floating straw that shows the breeze of enterprise to be blowing away from reactionary China, and towards the Japan of the future. Another item that we do not "hear" but know, is that the most influential men in Japan are earnestly canvassing the subject of female education, and gladly allow and welcome the teaching of girls by the wives of the professors and teachers in Japan. Another item we have "heard" and believe, in spite of our Yokohama friend, is that the Department of Education in Yedo are now arranging a National system of school education throughout Japan. In these schools all classes, from peasant to prince's son may attend. The studies are to be essentially the same as those in the civilized schools of the West. The only serious difficulty at present, is the lack of trained teachers. Indeed one of the most thoroughly cheering proofs of the progress of civilization in Japan, is the fact that the teachers need any training. When that sublime era shall dawn, in which it may be said of Japan as truly as it may be said of the United States,—“the schoolmaster is abroad in the land,” we believe that this latest born in the family of nations will take, and hold the same proud preëminence among the nations of Asia, as our favored land holds among the peoples of the New World.

WILLIAM E. GRIFFIS.

## COLOR OF THE SKY.

WITH reference to Mr. Brett's observations on the color of the sea and sky, I have one or two remarks to offer which I think may be of interest. Smokers have all noticed that the smoke from the end of a pipe or cigar is bluer than that which they puff from the mouth, and many have wondered, as I did for a long time, what the reason of this could be. The contrast may be well seen on a bright sunny day. This is, in fact, the simplest form of the experiment of the condensation of vapors causing them to pass through a fine blue to a white condition, which Professor Tyndall exhibited about two years ago, and which he employed to explain the blue color of the sky, and the remarkable polarization of its light. The finer state of division in the freshly formed smoke gives it its bright blue color, as does the finely divided aqueous vapor give to the blue sky; the smoke which has passed through the pipe-stem and mouth has become more condensed, and consequently gives a whiter cloud.

The color of water is, it appears, to a great degree dependent on the same cause of that of the sky. The investigations which Mr. Brett asks for have already commenced. M. Soret, of Geneva, soon after Professor Tyndall's researches on the cause of the blueness of the sky were published, made similar researches on the waters of the Lake of Geneva, and found that the light from the water, when blue, was polarized as the light from the sky, and so far there was the probability of the cause of the color being similar in the two cases. (See *Comptes Rendus*, Paris, April, 1869.) That particles in a fine state of division are the cause of the blueness of the water as well as of the sky is also made evident from a comparison of the water of different lakes, seas, and rivers. There are two popular theories as to the cause of the color of masses of water, which have very deep root, and yet must, it seems, be abandoned. One is that seas or lakes are blue by reflecting the blue sky. On this ground I have heard Mr. Brett's picture in the Academy this year of a deep blue sea, severely criticised, because

the sky, which he has painted with it, is not correspondingly blue, and could not furnish the sea's tint by reflection. Mr. Brett is, however, quite right in this fact, as many people know well enough; and the criticism was misplaced, if the blue color of a mass of water is dependent on the reflection of light from within water containing finely-divided particles—not from the surface only—as explained above. The second popular theory which seems to be ill-founded is that the green color of lakes, rivers, and seas is due to plants growing on the bottoms and giving their color by reflection. The green color is produced in the same way as the blue, in all probability, and may be due to a yellowness of the water in some cases, but it is less easily accounted for than the blue color. M. Sainte-Claire Deville is quoted by M. Soret as stating that waters which give a white residue on evaporation are blue, while those which give a yellow residue are green. Reflection of the color of the sky, and of the plant color from the bottom, does no doubt produce color of water in some cases, but it is only in shallow pools that the latter can have any effect, or through perfectly smooth surfaces that the former can be effective. Some cases of water coloration, which I have noted, will not be out of place here:—1. Intensely blue on a bright day, with pale sky and large cumulous clouds, was the color of water in reservoirs twenty feet deep at Plumstead, depositing chalk (by means of which the water is softened according to a patent process). 2. Intensely blue (the bluest here noted)—Mediterranean at Marseilles. 3. Bright blue—Lake of Geneva. 4. Darker blue, tending to indigo—sea near Guernsey; also the Laacher Sea, in the Eifel. 5. Pale blue—sea near chalk cliffs, being at a little distance from the coast green or grayish. 6. Pale blue or grayish blue—the Rhone, the Moselle, glacier streams, etc. 7. Green—the Rhine, the Scheldt (very markedly so at Antwerp, testified in Belgian pictures,) the Seine, Thames, Estuary, etc. 8. Intense green—in patches on the Lake of Geneva; in the evening, when the sun was just below the mountains, more frequently on the Lakes of Thun and Lucerne. 9. Bright green—the sea, on a windy day, with bright sun, off the Isle of Man. 10. The sea round the coral reefs of Florida is said

to be intensely green : when away from the coast it is deep blue. 11. On a heavy clouded day, with rain gleams of sunshine out at sea gave heavy patches of green color and reddish brown. 12. Water standing in an old copper mine at Killarney was intensely green, while the water in the lake at the side was black in the mass. 13. Red color is produced in some seas by algæ, in others and in some rivers by the breaking up of soil colored red by iron. 14. Opaque green color is produced in ponds (Serpentine and ornamental waters) by unicellular organisms, which sometimes swarm in these waters. They may similarly become red. Perhaps the most remarkable instance of blue color, due to the optical properties of water, is the blue grotto of Caprera, where, at any rate, the reflection of the sky is eliminated. A similar phenomenon is the glorious blue and green of the glacier fissures.

Leaving the question of surface reflection aside, which can only come into play in the case of road-side pools, and such mirror-like waters, and also leaving aside the appearance of vegetation in clear shallow streams and ponds, it seems that we may ascribe the blue color of masses of water to a peculiar reflection of the light from within the water, accompanied with polarization, and depending on suspended particles. Blackish, brownish and yellow color is due to vegetable matter in solution ; reddish brown to iron, sometimes ; green, sometimes, to copper algæ, but the green commonly seen on seas, lakes and rivers, like that of glacier-fissures, probably admits of a similar explanation to that of the blue. I trust some physicist may be induced to enter into the subject in these pages. Has not the production of a series of tints at sunset an origin which may tend to explain the various tints of blue and green waters ? I find that Mr. Sorby, in *Philosophical Magazine*, November, 1867, ascribed the blue color of the sky and the successive yellow orange and red tints of the setting sun to the absorption of the red rays more than the blue, by the fine aqueous vapor of the highest regions of the atmosphere and of the blue rays more than the red by the coarser vapors near the earth's surface—as e. g. a fog.—*Nature*.

*MIXED SCHOOLS.*

IT has come to be acknowledged on all hands that woman needs the highest education that can be given her, quite as much as man. And the idle question "for what purpose?" is being dropped out of sight, with a look of shame, by many who, once making much of it, have been answered by the urgent necessities of woman's existence in the present social structure. To the wise there can be no question whether the mental powers of woman should receive the highest development possible, any more than there is question whether the internal resources of a country should receive their highest development as a means to the well-being of that country. It is wonderful how much we talk and toil about the development of the nation's internal resources, when so large a proportion of its mental resources,—by which alone our physical resources can be utilized,—are left to run to waste. We talk of educational facilities, as if learning to read and write and cypher were an education,—which it is not any more than the cellar wall of a grand commercial block is the building itself.

The question then being yielded that the door to all the higher walks of education should be opened to woman, not merely because she needs them for practical use, but because she has a right to that higher organization, so to speak, which an education gives; that increased power of discrimination; that basis of sounder judgment; that keener insight into all things that appeal to her mental powers: the next question is, "where shall she receive this higher education?" In opening the doors of our colleges to woman it is granted that our larger colleges are the best places which the country can afford for an education. No school more meagre in its endowments; more barren in its appointments; more stunted in its professorships can compete with them. We have Longfellow and Lowell at Harvard, Goldwin Smith at Cornell, Hopkins at Williams, and Porter at Yale. How many times can the country duplicate these men? Men of a different stamp may teach Greek and Latin rules, mathematical formulas, scientific text-books, but the impulse to stirring, active thought which is needed within



the walls of a college, is given only by contact with the master minds. Vassar is, perhaps, the best appointed ladies' school in the country. It is easy to compare it with Harvard, or Cornell, which last has had even less time than Vassar in which to gather about itself the excellencies of a university. Those who think on educational matters regret deeply the scattering of funds, devoted to educational purposes, upon those lame and helpless and hopeless minor colleges with which the country is burdened. If we open separate colleges for ladies we only divide still more infinitesimally these educational funds, and yield all hope of attaining for these schools that standard which it requires both liberality of endowment and generations of labor to attain. No one attempts to deny that, as far as literary advantages are concerned, these larger colleges are the best places for women to obtain the advanced education which is being conceded to them. The very atmosphere surrounding such a school is of value to those whose nature is in any sense receptive. Those who, granting the first point, still oppose their admission to these schools, bring to the support of their opposition, undoubtedly, the same arguments that they would bring against mixed schools of any kind, or against mixed schools for adult pupils. It is contended by these persons that the contact of pupils of both sexes in the class-room is not conducive to the preservation of social propriety—that evils may occur from it. In a well managed mixed school this class contact is the only contact which differs from that allowed to pupils in any separate schools; or, at least, in those which are under anything short of what may be called convent discipline. We might almost say that the attendance of young people of both sexes at the same church would be liable to lead to as much evil as this. And when we take into consideration the going to and fro of young people together to evening service, without any supervision from those older than themselves—which is common in some places—and the free manners in some singers' seats, where young people are congregated, we may perhaps fear that our churches will sow seeds of disease more fatal than our mixed schools. There is no question but our mixed schools need a different and perhaps more careful supervision than some separate schools. If the his-

tory of our schools could be examined, our experience leads us to believe that as much evil would be found to have occurred among pupils in one kind of school as in the other. Incurrible subjects are liable to enter any school. And we are equally liable to the accident of unwise supervision whether in mixed or separate schools.

MRS. H. E. G. AREY.

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A SUGGESTION.

THEY have a delightful custom in the Swiss schools for boys, which might be adopted with great advantage to all concerned in this country. During the weeks of the summer vacation it is the habit of the teachers to make with their pupils what are called *voyages en zigzag*; that is pedestrian tours among the sublime mountains and charming valleys of that "land of beauty and grandeur." Squads of little fellows in their blouses, with their tough boots drawn on, and knapsacks on their back, may be met, during the season, on all the highways, and sometimes in the remotest passes of the Alps, as chirrupy as the birds on the boughs, and as light and bounding as the chamois that leap from crag to crag. They are perfect pictures of health and happiness, and the treasures of fine sights that they lay up in their memories, during these perambulations, it would be difficult to describe. We know of more than one urchin that has thus scaled the summits of the Faulhorn, looked down from the precipices of the Bevent, walked over the frozen oceans of the glaciers, and gazed in rapture upon the sunsets on the Jungfrau or Mont Blanc. Their tramps are made without danger and without much expense, and the life is one of incessant enjoyment and rapture. But why could not the same thing be done here, where we have the Catskills, the Adirondacks and the White Mountains, the exquisite lakes of the North, the river St. Lawrence with its rapids, Niagara and the lovely scenery of Western Virginia, which, we are told, is scarcely surpassed on the continent? Over the long intervening stretches the railroad will bridge the distance, while the inns are not expensive, and the country fare wholesome and nutritious.

## THE EXPERIENCE OF A GERMAN STUDENT.

## PART II.

LET me now give you a short schedule of the course of our studies.

Literature, Grammar, oral and written exercises—three hours.

*Religion*—united with *Secunda*, higher form—two hours.

*History*—united with *Secunda*, higher form—three hours.

*Geography*—united with *Secunda*, higher form—two hours.

*Mathematics*—four hours.

SECUNDA, HIGHER FORM—one year.

*Latin*—Cicero epist., Virgil, Livy, Horat., Terent., Grammar, Extemporalia, Exercises—eight hours.

*Greek*—Hom. Ilias, Plutarch, Grammar, Exercises—five hours.

*German, French, Religion, History, Geography*, with *Secunda*, lower form.

*Mathematics*—four hours.

PRIMA—Two years.

*Latin*—Cicero deoff., Tacitus Annual, and History, Horat. Sat., and Epist., Extemporalia, Free Compositions—eight hours.

*Greek*—Plato Symps., and Phädr., Sophocles Antigone, and Philoc., Extemporalia—five hours.

*Hebrew*—two hours.

*German*—Literature, Compositions, Speaking—two hours.

*French*—three hours.

*Religion*—two hours.

*History*—three hours.

*Mathematics*—five hours.

Every month, by every class, Latin dokimastica were written. Twice a year, at the close of the Summer and Winter terms, examinations were held which decided our fate. The last night of each term, when everything was over, we had in our large music hall a ball in honor of the new graduates who had passed their final examinations with more or less glory, and were now ready to begin their academical life. And they had every reason to rejoice that night, because it was indeed no child's play to pass that examination. This ball was a grand affair in our eyes. Although the convent paid all the expenses, we, the boys, were regarded as the hosts. In former times the *Primus*, a very important personage, a fortnight or so before the great event, rode on horseback, followed by one of the servants,

in full dress, for miles around in the country, and invited all the families who could think of claiming the honor to be presented at our monastic court. In my time, however, it was done by letters of invitation. After some music and dancing, a sumptuous supper was partaken of. Every professor, with the boys under his especial care, occupied one table, and we were very anxious to secure for our own table the most important or popular guests.

It was a happy time; not only those two nights in the year, but all. When I look back upon the past, I must confess, that the five years as a student in Kloster Ilfeld have been the happiest years of my life. But I did not regard it so at that time; we were all dreadful grumblers, and pitied ourselves as a kind of State's prisoners. It was true, the confinement to our rooms and work was pretty strict, but we were treated as gentlemen by gentlemen, and learned to behave like gentlemen. We acquired, without being aware of it, the habit of regularity and punctuality in all our duties: we enjoyed, under the eyes of our gentlemanly instructors, many liberties usually denied to the students of a gymnasium, and therefore the graduates from Ilfeld were generally conspicuous amongst other students for their more judicious use of the academical liberty granted to the German universities.

When I had passed my examination, I went home to spend the vacation before the beginning of the university lectures with my family, and was received with all the honors due to a student in the German sense of the word. My mother, a pious woman, wished to see her only son like his father, a minister of Christ. I had never thought much about my future career, but when now the moment had come to make my decision, I had no objection to devote myself to the service of the Church, and my grandfather willingly consented, because he thought I would find in the clerical profession the most quiet life—a supposition in which he, in other respects a clever and wise man, was very much mistaken.

With the beginning of the summer term, a few days after Easter, I arrived at Giessen, the university of my State, where I, according to the laws of the country, had to study

two successive years of the three which, at least, are required from every one who intends to enter public service. Giessen has always been a small university. But if I speak of small universities you would be very wrong if you regarded them as "poor concerns." They possess many advantages over the large universities. The ablest professors spend their best years usually at these small institutions, and when they have acquired celebrity follow a more remunerative call to a larger field. And then, another important point, the students in smaller universities as a rule work more, are easier brought in personal contact with their professors, and acquire, perhaps, less facility in grand talk and philosophical phrase-making, but more solid and sound learning than in the larger. When I began my university life, Giessen boasted of the largest number of students ever seen there. All four faculties were composed of learned and even celebrated professors, but the chief attraction was afforded by the philosophical faculty with Justus Liebig and his chemical laboratory.

After I had found comfortably furnished rooms in a private house, I went, at the proper time, with all my necessary papers to the *Aula*, the university building, where I was matriculated in the presence of the Chancellor, the Rector, and the Justice of the university. Then I called on the Dean of the theological faculty, and was received as a *studiosus S. S. Theologiæ evangelicæ*. The Dean, at that time, CHR. FR. FRITZSCHE, advised me kindly in respect to the course of lectures which I should take. Then I called on all the professors whose lectures during the summer term I intended to hear. According to the studious habits I had formed in Ilfeld, I wished to hear almost every lecture that I possibly could hear, and paid for them. This was a mistake, as I soon found out. The freedom from all compulsion, the freedom from all control which a student in a German university enjoys, exert such a charm over a young man coming from school, that he, especially if he has the necessary funds, during the first term at least, certainly will not study much. Notwithstanding this drawback I managed to hear my lectures pretty regularly, although my private work was almost suspended. Riding on horseback, driving

around in the country, parties to interesting points in the neighborhood, visits to the not very distant university of Marburg, etc.,—all this was more to my taste at that time than study. With the winter term, however, came a change, and from that time I have always been, not a book-worm, but a diligent student, who did not, intoxicated with the enjoyments of life, forget his earnest duty. I was regular in attending to the lectures, followed them with attention, took as many notes as I could and wrote them out at home. The professors delivered their lectures usually without notes, and those who used a manuscript were not so bound to it but that they often made long free excursions. The system of lecturing, as it is practised in the German universities, has for *well prepared* students great advantages. It shows them how a discipline is built up, how it is to be treated; it teaches them how to study, and how to use the apparatus of learning; they learn to distinguish the more important parts or points from the less important; and, what is of greater value still, an enthusiastic professor inspires them too with enthusiasm for their science.

In those large societies which you find in all German universities, and which regard fencing, duelling, and drinking, almost as the sole purpose of academical life, societies which, however, the best students often join, I took no interest—from the simple reason, I believe, because I had got over these sorts of things already in Ilfeld. But I had soon found, in my own and in the other faculties, a dozen congenial friends, with whom it was a pleasure to associate. Once a week we young theologians met as a literary club, read papers, and discussed important points and questions of our science. On other days we found ourselves all together in the rooms of some of our number, or at a public place in the city, or the neighboring villages, where we took our simple supper and often spent the most delicious nights in smoking, drinking and conversing. And as we were young and enthusiastic men from all the four faculties, every possible question, within and without our reach, came under debate, and this exchange of thoughts proved to be to our greatest mutual benefit. Science, knowledge, was our watchword. We did not care,

and I never have seen a German student who did, what the result of our studying would be. We did not ask: Of what use is this or that? We did not think of the future—we were students and had no other business than to study, to attend to our theological, or juridical, or medical, or philosophical science. You will perhaps be astonished, but it is true, and not at all a single or singular fact applying only to myself or a few other foolish fellows, I never thought of the ministry for which I was studying, and I never heard a word of it in my first two or three years. I was a theologian, and acted as if I always should be a theological student, or perhaps become in some future state of things a theological professor! The authenticity of a Biblical book, the interpretation of a word, the definition of a dogmatical point, were of greater importance to me than the whole world.

When my first year in Giessen was about to close, I felt very uneasy in my mind. My mother had given me a Christian education. The pastor who instructed me as a boy was one of those ministers so rarely found, at that time, in Germany, an earnest Christian, of Spencer's type; in Ilfeld nothing at least was done to make me an infidel, and now I had heard during a whole year nothing else than rationalisms of the purest water. I could not stand it any longer, and my grandfather's influence procured for me—against the will of the faculty—a permission from the Secretary of State to leave Giessen, and to continue my studies at Halle. There I found quite another theological atmosphere, more to my taste, and I never can forget what THOLUCK, HUPFELD, LEO, ERDMANN, each in his way, but especially JULIUS MÜLLER, have done for me. By their guidance, under God, I found myself again and my Saviour.

Neither at Giessen or Halle, however, did I confine myself to theological lectures. I took also a great interest in philosophy proper, in languages, history, literature and jurisprudence, especially canonical law.

At the approaching end of my fourth year, I reported myself as a candidate for examination to the theological faculty in Giessen. This examination is very severe, but not too severe if we consider that the candidate during his

whole university course never has been called to account for the use of his time, not even by a single question. Before we were admitted we had to send in a *curriculum vitæ*, one treatise on a given doctrinal question, and another on a given Biblical passage, all in Latin. After these papers had been found acceptable we were required to appear at a certain day in a certain room of the university building. There we found as many small tables as candidates, and paper, pens, and ink; and after we had taken our seats a member of the faculty gave us one question which was to be answered in writing during a certain time. Then followed another question, and so on about twenty or twenty-five more. This examination kept us busy for a week. After some time, when our papers had been criticised and marked by each professor in his discipline, and circulated amongst the whole faculty, we were with some exceptions, who were advised to retire and to present themselves next time, summoned to appear on a certain day before the theological faculty, in public meeting, and to submit to the oral examination.

At last I was through, had won the official title of *candidatus theologiæ*, and had the right as well as the duty to enter the seminary at Friedberg for one year. This theological seminary, of recent origin, is indebted for its existence to the necessity, felt by the government, of introducing the young men in a more practical way into their future ministerial duties as pastors, preachers, teachers, superintendents of the schools and of the poor, and as officers of the State in many relations of general life. As professors to this institution the three pastors of the little town had been appointed. The idea was undoubtedly sound and good, but, at my time at least, the practical operation was not so successful as it might have been. The temptation to play university professors was too great for our good old pastors. Nevertheless this seminary, and our obligation to stay there one year, was a great blessing for us and the poor established church of our country. Cases like the following could not happen any longer. A minister, of high standing now, and a faithful servant of his Master, was once, a few days after he had taken charge of a village church, called to the



death-bed of a poor old woman. He went there very much puzzled in his mind what on earth the woman could want of him. And when she at last asked him to pray with her, he was dumb-founded. He raked his memory for a thought, but in vain. At last he fell on his knees and prayed the prayer of the Lord, the cold sweat drizzling from his brow. He went home another man, better understanding, perhaps, his duty now than all the professors in the world could have taught him. It is a blessing, that our ministers of the present day know, at least, what is expected from them.

When I had finished my course in the seminary, I went home for a while in order to get ready for my final examination, the *examen pro ministerio*, as we call it, which is to be passed before the highest Board, appointed by the government for the ruling of the established church. This examination was conducted in the same manner as that before the theological faculty, except that to theoretical questions now also practical ones, a sermon and its delivery, and a catechization on a given text to be held in a public school, were added.

The passing of this examination made me, after a preparation of fourteen years, or, if you like of a whole life, a *candidatus ministerii*, and gave me the right to apply for the appointment to a living in my State.

I had entered a prosaic, stern, and sorrowful life—the happy days of the student were over, forever!



ILLUSTRATION.—Its serious office is to help an abstract argument, lighten and facilitate the discussion of grave topics, administer a fillip to infirm attention, and arrest a wayward fancy. Illustrations don't prove a point, but they help us to tide over the labor of proof, and sweeten the extreme effort of steady thought. Of all gifts this secures readers for weighty questions on morals, politics, and religion; and is the only method of lightening these, except neatness and precision of expression, which can for a time dispense with all ornament, whatever, to the severity of the topic under treatment."

*A MUCH NEEDED REFORM IN PRINTING  
AND WRITING.*

WHEN so many young persons are compelled to wear glasses, and diseases of the eye are so prevalent; and when the appetite for reading, to whose indulgence those troubles are largely due, is more and more stimulated, as the attractions and accessibility of books, and the demands for culture, increase, any change in the methods of printing and writing which promises relief to the eye, ought to awaken universal interest. Our object is to call attention to an article in the *Boston Medical and Surgical Journal*, for January 18, and entitled, "Proposed Improvements in Printing and Writing:"

The writer tells us that, during the last twelve years, he has "passed through various stages of blindness, up to nearly total darkness." During the progress of this trouble, and also during its decline, for by an operation he hoped to recover his sight, he performed a series of experiments and made observations, based upon the condition of his sight, which are full of interest and suggestion.

It will probably be a new idea to most of us; yet it is easy to see on reflection that nothing could be more absurd than our present method of printing and writing, with dark letters on a light ground. For we see objects only when they emit or reflect light to the eyes; and as white reflects and black absorbs nearly all the light that falls upon them respectively, when we look at the page of our book, light pours into the eye from every part of it but that which ought to be illuminated, and we actually see every part of the page *except* the part we wish to see, namely, the letters.

But some one may object that this proves too much, and that we must see the letters because we draw some sense from them. The answer is, that we only see the illuminated space around the letters, which latter are seen only negatively as vacant places upon the illuminated retina.

Now this negative sight is accompanied by serious evils. One might ask, What difference does it make practically whether we see objects directly or negatively in the manner

described? Is not the *contrast* the essential thing? Two points are to be noticed in reply.

1. Light is a stimulus to the eye, and up to a certain point a healthy stimulus; but the light which pours from the white margin and spaces of the printed page, upon the eye already strained in attention to the meaning of the letters, is in excess, and must affect the eye somewhat as ardent spirits do the body, when an attempt is made by that method to goad the weary body to new exertions.
2. Even the negative picture of the letters on the retina is blurred and obscured by the rays which enter the eye from various portions of the page, just as the shadows thrown on a ceiling by a chandelier are all rendered obscure and ill-defined by the cross lights from the several burners.

Still further to see the error of our present system, consider how much easier to read are the bright letters on the backs of books, how grateful are the occasional signs in the street presenting bright letters on a dark ground; compare a bronze bust against a white wall with a white bust before a shield of blue or black velvet, or, after the first surprise and admiration are over, the silhouettes of Konewka even, with the sketches on a boy's dark slate. The dazzling effect of masses of snow, stars fading at dawn and reappearing upon the dark sky of evening, the blackened inner surface of the photographer's camera, and of the telescope and microscope, to absorb the unnecessary light which cannot be excluded, tend also to show (in the words of the writer referred to) "that just in proportion as we exclude light from the eye, excepting what is radiated or reflected from the object to be viewed, will that object be rendered visible and distinct."

But more pertinent than these considerations, which might perhaps be dismissed as mere theory, is the actual experience of the writer. In the earlier stages of his blindness (he writes) "while a little sight still remained, he found that gilt titles on the back of almost any book could be read with comparative ease, while the same title printed in black letters, *of a much larger size*, on the white title-page could not be distinguished. It was also observed that a

white or light-colored thread resting on a black surface could be seen with tolerable distinctness, while a much coarser black thread resting on a white surface was invisible. The reader can satisfy himself of the correctness of these statements by repeating the experiments at dusk or in a very dim light. In the fall and winter of 1853 and '54 the writer spent several months at the Ohio Institute for the Blind. Of 120 pupils, only about one-third were in total darkness; the remainder possessed more or less sight. Every one of the latter with whom the writer conversed on the subject, confirmed his own experience as related above."

It seems impossible then to doubt the evils of the present system. We would notice, however, two practical questions attending the proposed change: 1. How shall the mechanical work of printing be conducted? Shall we use our present types and print with a light ink on a dark paper, or will the tendency of a dark ground to strike through the light ink be so great as to oblige us to sink the letters and print the dark ground on light-colored paper, leaving the letters the color of the sheets? But this, as our writer observes, "is a matter for the ink-maker and the practical printer."

2. What combination of colors shall we adopt as most grateful to the eye, still observing the condition that the letters shall be of lighter color than the ground? As our writer's vision improved he tried to test the progress of vision as indicated by the ability to distinguish colors. He "procured a piece of black card-board about ten inches square. Upon this were pasted squares of paper of different colors, care being taken to select those with the brightest hues. These squares were about one and a half inches in size, and placed in rows about the same distance apart." At the first trial, after admitting light to the eye which had been operated upon by the surgeon, the writer continues, "the gilt square only could be perceived and this but faintly. The yellow soon became perceptible, while the white square situated directly between the two remained invisible. As the vision continued to improve the blue was the next in order to be perceived. This was speedily followed by the white, red, and green, which were nearly simultaneous in

making their appearance." This tardy appearance of the white seems to contradict our general theory; yet it may have been owing to its position between yellow and gilt, which by too great proximity, as it were, overshadowed or rather outshone it. Or the incident may teach us that so great a contrast as between white and black, or at least just that contrast, is not the best for our purpose. One of the strongest of contrasts is that between blue and its complement orange, and perhaps this beautiful combination may prove to be the one desired. Whether the chemical properties residing at the violent end of the spectrum would occasion any difficulties we do not know; but this and all the other questions we have noticed will readily and speedily be determined by the experiments of practical men when the interest of the public has been enlisted.

Who then of the publishers will begin this good work? (\*) Policy as well as philanthropy seems to incite to it. We know not why, after the first necessary changes (and these probably not great ones) have been made, the new process should be more expensive than the present one. Rather, looking at the one item of proof-reading, we should expect it to be less expensive. On the other hand, consider the army of new readers which would immediately spring up, both of older persons once more enabled to use their eyes enfeebled by the present system, and of younger ones who could enter the inviting fields of reading without fear of endangering their eyesight. At present of what avail to announce the most fascinating volumes or periodicals, or to publish captivating lists of the "Best Reading," if we must however reluctantly pass them by to save our eyes? Let some publisher try the experiment, avoiding the diamond type, and also the present hair-lines in the letters, which leave vacant spaces as the type become worn, and are always harder to see; and let him above all else give us *bright letters on a dark ground*, and we believe we can promise him a rich reward in every way.

It seems idle to press the claims of the reading public. It is almost a common-place to urge that the hope of our civilization rests upon education and upon the increase of

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(\*) Dr. Johnson, in the construction of his valuable School Charts, has adopted this plan.—Ed.

the number of those who read and think as they have opportunity; upon education we say, more directly than upon religion even, for religion (or the semblance of it) without intelligence has been one of the most terrible scourges of the race, while education, though at periods it has for certain reasons existed apart from the religious spirit, will eventually, we are persuaded, bring men back to their allegiance to the Unseen and Eternal.

We call attention again to the paper in the *Medical Journal*, to which whatever of interest this article contains is chiefly due.—*Q. R. S., in the Christian Register.*

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NECROLOGY OF EMINENT TEACHERS  
DECEASED IN 1871.

(Continued from the May Number.)

ON the 21st of August, Hon. PHINEAS BARNES of Portland, Me., died in that city, aged 60 years. He was a native of Maine, a graduate of Bowdoin College in 1829, and after teaching, and studying law for some years, was appointed professor of Greek and Latin Languages and Literature in Waterville College (now Colby University) in 1834. He held this position till 1839, when he resumed the practice of his profession, in which he eventually attained a high reputation. For six years he was editor of the *Portland Advertiser*. He had also engaged in political life, and was the candidate of the Old Line Whigs for Governor in 1860. He was an active promoter of education through life, and was at the time of his death a Trustee of the Maine General Hospital and of the Agricultural College.

A passing notice is due to Rev. ASA RAND, who died August 24th, who though much more a journalist than a teacher, was yet for some years, from 1825 to 1832 or 1833, principal of the Female Seminary at Brookfield, Mass.; and also to Mrs. LOUISA HOOKER VAN METER, who died Aug. 27th, and who in her twenty-three years of missionary life

in Burmah, was much of the time engaged in teaching the native women and girls the rudiments of education.

Professor JOHN EDWARDS HOLBROOK, M.D., one of the most eminent naturalists in the United States, died at Norfolk, Mass., Sept. 8th, 1871, in his 77th year. A native of Wrentham, Mass., a graduate from Brown University in 1815, and educated in his profession and in Natural Science, in Philadelphia, London, Edinburgh, and Paris, he had established himself at Charleston S. C. in 1822, and in 1824 was chosen Professor of Anatomy in the Medical College of South Carolina at Charleston. His duties as a professor were performed with conscientious care and thoroughness, but his whole soul was engaged in his zoological studies. He published several volumes of Natural History, his specialties being Herpetology and Ichthyology. He was a pupil of Cuvier, and the lifelong friend of Agassiz.

DENNIS HART MAHAN, LL.D., for more than forty years professor of Civil and Military Engineering at West Point, and author of the best text-books extant in Military Science, took his own life in a fit of temporary insanity, Sept. 16, 1871, at the age of 69 years. He graduated from West Point at the head of his class in 1824, was assistant professor for two years, and then was sent to Europe by the War Department to study fortification and engineering under the great military authorities of the time. After four years he returned to the United States and was immediately appointed Professor of Military and Civil Engineering. A perfect enthusiast in his profession, he was, perhaps, at times a little intolerant of idleness and inefficiency; but his teachings were so clear and so thorough, and he was so earnest in enforcing principles that even the dullest pupils remembered him with respect and gratitude.

GEORGE WYLLYS BENEDICT, LL. D., for almost thirty years a teacher, and subsequently a warm and earnest friend of education, died in Burlington, Vermont, Sept. 23, aged nearly 76 years. He was born in North Stamford, Conn., graduated from Williams College in 1818 with the highest honors of his class, was tutor in Williams College

and principal of Westfield, Mass., and Newburgh, N. Y., academies, from 1818 to 1825; from 1825 to 1847 professor of Mathematics and Natural Philosophy in the University of Vermont at Burlington, and during all that time active and energetic in promoting the financial interests of the University, as well as in elevating its curriculum of instruction; subsequently a constructor and owner of telegraph lines, a State Senator, for fifteen years publisher and editor of the *Burlington Free Press*, and at all times the zealous promoter of education.

On the 30th of September, Rev. JOHN MITCHELL BONNELL, D.D., died at Macon, Ga. He was born in Southampton, Bucks County, Pa., April 16, 1820, educated in Philadelphia and in Washington College, Pa., from which he graduated in 1838, and soon after removed to Georgia to engage in teaching. Not long after his migration thither he commenced his preparations for the ministry in the Methodist Episcopal Church South, and in 1846 joined the Georgia Conference. His abilities as a teacher were very soon recognized, and he was elected professor of Greek in Emory College, Ga., and not long after professor of Natural Sciences in the Wesleyan Female College at Macon, Ga. From this position he was called to be principal of the Methodist Female College in Tuscaloosa, Ala., and in 1859 recalled to the presidency of the Wesleyan Female College at Macon, which he held till his death. He had published two text-books on English composition, was well known as a writer of signal ability and merit, and possessed very thorough knowledge and admirable taste in music. To him the Southern Methodist Church is largely indebted for the improvement of its church music and the introduction of musical instruments in its worship.

On the 22d of October, WILLIAM SHERWOOD, for almost fifty years a teacher in the city of New York, died at Great Barrington, Mass., in his 86th year. His early opportunities of training were excellent, and when, in 1814, he came to New York city to establish a Classical school, he brought with him a reputation already established for sound classical learning and aptness to teach. His school was very



successful, and many hundreds of the business men in New York and other cities, owe to William Sherwood their thorough preliminary training and their fondness for classical study. He was the author of one book, "Self-Culture," which was highly commended by such men as Charles Anthon, Dr. Hawks, William C. Bryant and others.

The late THOMAS EWING, U. S. Senator, Secretary of the Treasury and of the Interior, who died October 26th, was a teacher from 1814 to 1816, and found the position more to his mind than the political strifes with which so many of his after years were clouded.

On the 27th of October, Rev. NATHANIAL MACON CRAWFORD, D.D., twice president of Mercer University, Ga., and since president of Georgetown College, Ky., died at Atlanta, Ga., in the 61st year of his age. He was born near Lexington, Ga., was a son of Hon. William H. Crawford, U. S. Senator and Minister to France. He was educated at the University of Georgia, whence he graduated in 1829; studied law, was professor of Mathematics in Oglethorpe University from 1837 to 1841; entered the ministry in the Baptist Church in 1843, and was a pastor till 1847. He was professor of Biblical Literature in Mercer University from 1847 to 1854, and president of that University 1854-1856. In 1857 he was professor of Mental and Moral Philosophy in the University of Mississippi, and the next year professor of Theology in the Western Baptist Theological Institute at Georgetown, Ky. But Georgia had special charms for him, and in 1859 he had returned to the presidency of Mercer University, which was closed in 1862 by the war. Just after the death of Dr. Campbell, president of Georgetown College in 1865, the Trustees called Dr. Crawford to the presidency of that college. He accepted and served till the beginning of 1871, when his health having failed he resigned and returned to Georgia to die.

Rev. SEPTIMUS TUSTIN, D.D., who died in Washington, D. C., October 28th, was in early life a teacher, and in 1836 was chaplain, and, for a time, we believe, also a professor in the University of Virginia.

On the 3d of November, Rev. EZRA EASTMANN ADAMS,

D.D., professor of Theology and acting president in Lincoln University, Oxford, Pa., died at the age of 58 years. He was born in Nassau, N. H., graduated from Dartmouth College in 1836, was for ten years chaplain to seamen at Havre, France, traveled extensively in Europe, returned in 1854 to the United States, was pastor at Nashua, N. H., for six years, removed to Philadelphia in 1860 and was pastor there for seven years. He was next appointed (in 1867) professor of Theology in Lincoln University, which position he filled with great ability till his death.

Miss HANNAH HOYT, for fifty years a successful teacher in New Brunswick, N. J., died there November 7, at the age of 66. She was a native of Darien, Conn. She commenced teaching at the age of sixteen, and from the first manifested a remarkable aptitude for the work. Her first schools, it is said, were mixed, *i. e.*, of both sexes, and she was so skillful in their management as speedily to disarm all opposition. For 33 years previous to her death she had been at the head of a Female Seminary in New Brunswick, and so thorough was her instruction and so admirable her system that the professors of Rutgers College were fain to acknowledge that her examinations would compare favorably with their own. She was an enthusiast in her profession, and while she was severe in her dealings with the indolent and wayward, she won the affections of all who honestly sought for improvement.

JOSEPH GREEN COGSWELL, LL.D., the venerable and venerated librarian of Astor Library for so many years, who died November 26, at Cambridge, Mass., was in early life a very successful teacher. Born in Ipswich, Mass., Sept. 27, 1786, he was educated at Harvard College, whence he graduated in 1806, went on a voyage to the East Indies, and on his return studied law with Fisher Ames. From 1814 to 1816 he was a tutor at Cambridge. For the next four years he was in Europe studying at the Continental Universities and traveling. From 1820 to 1823 he was a professor of Mineralogy and Geology and librarian at Harvard University, and then founded with George Bancroft the celebrated Round Hill School at Northampton. After

five years teaching there, he went to North Carolina and established a similar school at Raleigh, where he remained eight or nine years. His subsequent career as an editor, book-collector and organizer of the Astor Library is well known. He had resided at Cambridge since 1865.

On the 27th of November, Rev. HORACE FLETCHER, D.D., of Townshend, Vermont, died there, aged 72 years. He was a graduate of Dartmouth in 1817, studied law and practised his profession for several years in Cavendish, his native town. The practice of the law was not, however, to his taste, and he turned his attention to teaching, for which he was admirably qualified. For a period of about 18 years he was at the head of the excellent Academy at North Bennington, Vermont. From thence he removed to Townshend, Vt., in 1843, where he was ordained as pastor of the Baptist Church. He had been actively instrumental in the promotion of higher education in the State till his death, but was not, we believe, engaged personally in teaching after his removal to Townshend.

Rev. JOHN NELSON, D.D., of Leicester, Mass., who died December 6th at the age of 85, had been in 1809-10 a tutor in Williams College, whence he had graduated in 1807, and during his 58 years residence in Leicester had been a zealous promoter of education; and GEORGE HILL, the venerable poet and former librarian of the State Department at Washington, a graduate from Yale in 1816, was from 1827 to 1831 professor of Mathematics in the Navy.

Mrs. MARTHA H. B. KALOPOTHAKES, a devoted missionary to Greece, who died at Athens, December 15, had been very actively engaged in the instruction of Greek girls and young women for several years.

Rt. Rev. OSMON CLEANDER BAKER, D.D., Bishop of the Methodist Episcopal Church, since 1852, who died at Concord, N. H., Dec. 20, at the age of 59, had spent about 15 years of his life in teaching, being professor and principal of the Newbury Seminary, Vt., from 1834 to 1844, and professor in the Biblical Institute at Concord from 1847 till his election as Bishop in 1852, and his interest in higher education never failed, until his health was so completely broken down that he was obliged to relinquish all care.

On the 27th of December, Rev. ROBERT JEFFERSON BRECKENRIDGE, D.D., LL.D., died at Danville, Ky., in the 72nd year of his age. He graduated from Union College in 1819, studied law and practised from 1823 to 1831; entered the ministry of the Presbyterian Church, and was pastor at Baltimore from 1832 to 1845. From 1845 to 1847 he was president of Jefferson College, Pa.; from 1847 to 1853 pastor at Lexington, Ky., and superintendent of Public Instruction for the State of Ky. From 1853 to his death he was professor of Theology in the Danville Theological Seminary, Ky. He was a man of first-rate ability, extensive learning, and great eloquence. His pupils were often edified and charmed by his method of handling his topics; but he was imperious, dogmatical, and terribly severe on all who differed from him in educational, political, or theological questions.

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#### *GEOGRAPHICAL NOTES.*

UNITED STATES.—But for great physical and moral disturbances in nature, our knowledge of geography would be in danger of falling into arrears; and on this account we may derive some comfort from the recent earthquake in California, the first since 1812 productive of loss of life. It began shortly after 2 o'clock, A.M., on Tuesday, March 26, moving from northwest to southeast (following the general trend of the Coast Range and the Sierra Nevada), and increasing in violence as it proceeded. From Red Bluff, on the Sacramento River, in the north, it disturbed every river valley to San Pedro, including the Yosemite, which was not, however, materially disfigured by the falling of rocks and trees that took place. On the coast no damage was sustained, though the shock was felt at Sacramento and San Francisco as well as, for a longer time, at Los Angeles. At the latter place, "not a breath of air was stirring at the time. The appearance of the moon was dark, murky, and blood red." No unusual commotion of the sea was noticeable on the coast, and indeed the force of the earthquake was chiefly exerted inland, east of the Sierra.

In Nevada, it was felt at Virginia City and at Carson City ; and "some of the men working in the mines say the sensations they experienced down in the bowels of the earth—down where the quakes were rushing along—were very disagreeable." More powerful was the shaking at Visalia, in Tulare County, once the bed of an extensive lake. Here, walls were cracked and started, and even thrown down, though no person suffered. From 2.20 to 4 A.M., as many as thirty-two shocks were counted ; and up to Wednesday morning, one thousand. A noise as of cannonading frequently heralded the shocks. At Camp Independence, it seemed to the ear "as if the mighty mountains skirting the valley were breaking up and rolling into plains below—the sound was in the air and under the earth, and its reverberations through the tumbling mountains were as terrific as the noise itself." This settlement is in Inyo County, on Owen's River, a considerable stream running south into Owen's Lake. No fatalities occurred there ; but in addition to their own casualties and apprehensions the inhabitants were witnesses of the calamity of their neighbors. Says one account :

"At short intervals would be heard away off in the direction of Lone Pine and the Lake that terrible boom ! bang ! as if the very mountains themselves were splitting in twain. 'Look out, boys,' they would cry, 'here she comes again !' and come she would. But in each instance they had time to brace themselves for the advancing shock. Not only did tens of thousands of rocks and boulders rolling down the mountains add to the confusion of the scene, but in the Sierras, on one side of the valley, avalanche after avalanche of snow was sent thundering, booming, almost screaming down from the regions of eternal frost and ice to the gulfs below."

When daylight came, the entire valley south of Independence and towards Lone Pine was filled with smoke and dust, and in places, it is said, the fumes of sulphur were almost suffocating. Other noteworthy phenomena in this vicinity were as follows :

"At Tibbet's Ranch, fifteen miles above Independence, forty acres of ground sank about seven feet below the surface of the surrounding country. Big Owen's Lake has risen four feet since the first shock. Owen's River ran over its bank, depositing shoals of fish on shore ; afterward it receded. For a distance of three or four miles through Lone Pine the earth is cracked. One side remained station-

ary, while the other sank seven or eight feet, leaving a wall of earth, extending over three miles in length, where formerly was a level plain. Innumerable cracks were made throughout the valley. Kern and Owen's rivers turned and ran up stream for several minutes, leaving their beds dry; finally they returned with largely increased volumes of water."

The severest visitation, however, fell upon Lone Pine, where, it was reckoned, there were seven thousand shocks in three days, prostrating fifty frame houses or cabins, destroying twenty-three lives, and injuring about thirty more persons. Lone Pine is eighteen miles from Independence:

"It is the trading place of a mining district of the same name, otherwise known as the Cerro Gordo district, and could not number 500 population all told. It contained a hotel, three or four stores of general merchandise, two breweries, two livery stables, saloons, etc. The mining district is about fifty miles in length by six in width, and is said to contain a great number of gold and silver bearing lodes, generally of great richness. Water is exceedingly scarce, and the only timber is scattered groves of pinon and juniper, on the adjacent foothills and mountains. The county should properly belong to Nevada, as it lies wholly on the eastern side of the Sierra Nevada mountains, being east of Tulare County, between Mono and San Bernardino, and its territory is traversed by three ranges of mountains—the Inyo, the Paramint, and the Armogosa. There is but little land fit for tillage, except a narrow strip immediately along Owen's river, the valleys being generally dry and alkaline, and much of the water impregnated with chloride of soda, so as to be unfit for use. The celebrated region known as 'Death's Valley,' probably the most forlorn and desolate spot on the continent, is found in this country, and, from all accounts, is well worthy its name. It is four hundred feet below sea level, having, without doubt, once been the bed of a vast lake, the waters of which were heavily charged with salt and soda, which now incrusts a large portion of the surface to the depth of several inches. The valley is almost destitute of any traces of vegetation, and the only signs of animal life to be seen are swarms of countless myriads of small black gnats, which greatly annoy the traveler, 'entering his eyes, ears, and nose, their attacks being persistent and their sting peculiarly irritating.' The heat in the basin is intense and unendurable, ranging throughout the summers from 110 to 140 degrees during the day."

The killed were nearly all Spanish-Americans; of the injured a less proportion were foreigners. Nothing is more striking in the history of this catastrophe than the calling of a public meeting within four hours after the first shock,

"to devise means to assist, as far as possible, the distressed, and to care for the sick and the homeless, and bury the dead." And it is characteristic of American republican training that this six o'clock gathering organized by electing a president and secretary, and appointed its committees in due course—the earth, meantime, never ceasing to heave and split and roar as if the end of the world had come.

—It now remains for physicists to determine what connection, if any, exists between this earthquake and other contemporary disturbances in distant parts of the globe. Volcanic manifestations began last October in the Philippine Islands, and were succeeded in December by very heavy earthquakes in Mindanao and eruptions in Luzon, the earthquakes being repeated in January in the latter island. Early in April Antioch was half destroyed by an earthquake which had had only too many predecessors. Fifteen hundred of the inhabitants are said to have perished. The same month, Vesuvius began to play in its grandest fashion, causing ruin to the villages on its slopes and death to incautious spectators. Earthquakes are also reported in January at Patna in Bengal, in the Himalayas, and in the Bombay Presidency; at Broossa in Asia Minor; and at Guayaquil in Ecuador—the land *par excellence* of earthquakes.

—Professor W. Powell submitted in April to Professor Henry, of the Smithsonian, the preliminary report of his survey for the past two years of the Colorado of the West, and its adjacent country, concluding with an outline of the work remaining to be done, and a request for an appropriation of \$20,000 for this purpose. The principal work of the main body of the expedition, during the winter and spring, was topographical. A base-line running north and south, 500 yards in length, was carefully and exactly measured, and triangulation can now go forward. The geology, mineralogy, etc., of the Colorado region will also be thoroughly explored.

—In response to a petition from F. A. Conkling and a number of the principal merchants of New York, the President appointed (March 13) Brevet Major-General Andrew A. Humphreys, of the U. S. Army, Prof. Benjamin Pierce



of Massachusetts, and Capt. Daniel Ammen, of the U. S. Navy, Commissioners to examine and consider all surveys, plans, proposals or suggestions of routes of communication by canal or water connection between the Atlantic and Pacific Oceans, across, over or near the Isthmus connecting North and South America, which have already been submitted, or which may be hereafter submitted to the President during the pendency of their appointment, or which may be referred to them by the President, and to report, in writing, their conclusions, and the result of such examination to the President, with their opinion as to the probable cost and practicability of such route or plan, and such other matters in connection therewith as they may think proper and pertinent.

ASIA.—Dr. Campbell, in a series of articles on Thibet, in the *Phoenix*, furnishes some highly entertaining glimpses of life in that country. The Thibetans eat animal food in endless forms, and a large portion of the people live on nothing else. During the summer months they use very little fresh meat. They do not like it boiled, and are not partial to it raw, unless it has been dried. In November there is a great slaughter, and a wealthy man, who has perhaps 7,000 sheep, will kill 200 at this time for his year's consumption. The animal after being killed is skinned and gutted, and then placed on its feet in a free current of air. In a couple of days it becomes quite hard and is then ready for eating. It is kept in this way for more than a year without spoiling, even during the rainy periods. When long exposed to the wind of Thibet it becomes so dry that it may be rolled into powder between the hands. In this state it is mixed with water and drunk, and used in various other ways. The livers of sheep and other animals are similarly dried or frozen, and are much prized, but to strangers they are very distasteful for their bitterness and hardness. The fat is dried, packed in the stomachs, and then sent to market or kept home for use. The lakes of Thibet are full of fish, of which only one kind, named *Choolap*, is described; it grows to the weight of 8lb., and is a coarse food. It is, however, caught and preserved largely; the fish being gutted, split up, the tail put in the mouth, and dried, without salt, in the



open air. Thus prepared they will keep for a year. The mode of catching them is singular: when the lakes are frozen over, a hole is made in the ice, to which they rush in such abundance that they are pulled out by the hand. There are no leeches or mosquitoes in Thibet, nor are maggots or fleas ever seen there; and in Dingcham or Thibet Proper there are no bees or wasps.—(See *Nature*, March 21, 1872.)

AFRICA.—We will only signalize, as the French say, without attempting to epitomize it, an excellent article in the *Cornhill Magazine* for April, on the "Portuguese in Africa." Those who have followed the fortunes of Dr. Livingstone, and remember that a great if not the greatest part of his hardships have arisen from the hostility of Portuguese slave-traders, will find here a satisfying picture of the worthless race that still defy the moral sense of Christendom, foment wars among the African tribes, and delay the spread of civilization. We cite a single sentence: "As Mozambique faded from my view, I thought what a gain it would be to the cause of humanity if the Portuguese in Africa could be suddenly blotted from existence, even though no other civilized power occupied their place for centuries to come."

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gua.] Ethnological and Anthropological Notes on Nicaragua. 8vo., pp. 48. Paris, 1871.—NEWBERRY, J. S. Geological Survey of Ohio. Report of Progress in 1870. 8vo., pp. 568. With maps, showing geologic sections. Columbus, 1871.—STIELER, A. Hand-Atlas. Gotha, 1871-72. (This admirable work is still being issued in parts, of which there will be 30, each containing three colored maps, engraved on copper. These parts are for sale separately, at the wonderfully low price of 50 cents—i. e., 17 cents apiece for maps brought down to the latest date, executed in the highest cartographic style, and measuring 13x16. They may be had, as far as issued, of Mr. L. W. Schmidt, 24 Barclay St., N. Y.)—VON SPRUNER, KARL. Hand-Atlas for the Middle Ages and for Modern Times. New York: B. Westermann & Co. (This work covers a different field from the foregoing, and is rather larger and less convenient for consultation, but is of the same quality as regards accuracy and artistic execution.)—ZELL, T. ELLWOOD. Descriptive Hand-Atlas of the World. Philadelphia, 1871-72. (Now issuing in 25 parts, at fifty cents each, each part containing at least one map, 16x11, colored and indexed. The folding is quarto. These maps are distinct and pleasing, but not to be compared with the foregoing in point of fullness or accuracy.)

*Periodical Literature*:—*Littell's Living Age*, March 9: "Notes on East Greenland," by A. Pansch, M.D., of the German Arctic Expedition of 1869-70 (from *Fraser's Magazine*); March 16: "Wanderings in Japan," by A. B. Mitford, author of "Tales of Old Japan" (from the *Cornhill Magazine*). The second paper of these "Wanderings" is reprinted in *Every Saturday* of April 6. We may call attention here to the highly instructive articles on French manners and domestic life in *Blackwood's Magazine* for some months past.

—The most complete catalogue of geographical works published Dec. 1, 1870-71, appears in No. 36 of the *Journal* of the Berlin Geographical Society (pp. 561-636), with careful classifications, and with mention of periodical articles, maps, plans, etc.

—*L'Année Géographique*, an annual review founded in

1862, was suspended on account of the siege of Paris, and now appears with vols. ix. and x. in one (1870-71). It is a simply invaluable and incomparable compilation—German rather than French in its comprehensiveness and accuracy.

—The President of the Geographical Society of Italy has written to the papers to say that the Conservator of the Bibliothèque Royale of Belgium has discovered a MS., in twelve chapters, containing the original autograph account of the discovery of Australia by Manuel Godinho, a Portuguese navigator who touched there in 1601, and whose priority to the Dutch sailors, who arrived three or four years later, has been unduly neglected. Mr. Ruelens vouches for the authenticity of the MS., which was brought to light at the Antwerp Exhibition, though it passed unnoticed in the crowd.—*Academy*, Feb. 15.

—Don Armando Pissis is coming from Chile to Europe to revise and hasten the engraving and printing of the geographical and geological (*gy.* mineralogical) map of Chile, on which he has been engaged for twenty years.—*Athenæum*, March 9.

*Obituary.*—The name of Colonel Chesney, F.R.S., of the Royal Artillery, who died on Tuesday, the 30th ult., at his residence near Killeel, Co. Down, Ireland, in the 83d year of his age, was almost more familiar to the last generation than to this. Among his various titles to eminence as a traveler, *savan*, and military critic, he will be chiefly known as "the pioneer of the overland route to India." It is now nearly forty years since General, then Captain, Chesney returned from his explorations of the Euphrates for the purpose of establishing steam communication with India *via* Egypt and Asia Minor, to ask the Government to give him command of an expedition. The demand was granted; two vessels, the *Tigris* and the *Euphrates*, were placed at his disposal. The indefatigable manner in which he prosecuted his scheme, in the face of many disappointments and discouragements, is well known. He has himself written the history of his travels and adventures; and the lines of communication now in existence bear witness to the practical value of his projects. General Chesney has, for many years back, enjoyed the repose which was the fitting reward of much arduous toil; and now leaves behind him the record of a useful, honorable, and well-spent life.—*Nature*, Feb. 8.

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ELISEE RECLUS, the eminent French Geographer, has been released from imprisonment, in response to a petition prepared by Mr. G. P. Putnam, and signed by a number of American men of letters.

*EDUCATIONAL INTELLIGENCE.*

**T**HE NATIONAL EDUCATIONAL ASSOCIATION.—The next annual meeting of the National Educational Association will be held in the City of Boston, Mass., on the 6th, 7th, and 8th days of August. The forenoon and evening of each day will be occupied by the General Association, and the afternoon of each day by the four Departments—Elementary, Normal, Superintendence, and Higher Education. The officers intrusted with the duty of making the arrangements, are making good progress, and a full announcement will be made at an early day.

**OHIO.**—The Eighteenth Annual Report of the State School Commissioner, is marked by the fulness and attention to details which have characterized previous reports. The statistics relating to the past year are even more complete and reliable than usual, and give a very satisfactory statement of the condition of education. The enormous cost of the school system is shown by the expenditures, the amount of which, exclusive of interest on and redemption of bonds, was for the year ending Aug. 1, 1871, \$6,831,034.56. The Commissioner, Mr. Thomas W. Harvey, thinks that from \$150,000 to \$200,000 are really spent for school supervision. There is no general law authorizing this expenditure of school money; but necessity has compelled the adoption and development of a scheme of supervision, and it may now be considered a permanent and useful feature of the system. In the statistical information we find the following: Number of white youth of school age, 1,031,765, colored youth, 26,283, total, 1,058,048; total number of different pupils enrolled, 719,372; of this number 86,020 were between 10 and 21 years of age; average daily attendance, 432,452; number of school houses, 11,571, an increase of 24; value of school houses, \$14,988,612; average wages of teachers per month, males, \$41.00, females, \$26.00. These figures seem to convince a Cincinnati correspondent that teachers are not "altogether the poorly paid class that some people think them." "Some people," however, will still continue to believe as heretofore. There has been a decrease in the

number of teachers employed in colored schools, which is accounted for in the following manner: "This is doubtless occasioned by a gradual change in the policy of many school boards in regard to the education of colored youth. Where the number of such youth residing conveniently near each other is too small to admit of the establishment, with reasonable economy, of a separate school for them, many Boards of Education are now admitting them to the common schools under their control, and in some cities and towns in which the question as to convenience of location does not arise, colored and white youth attend the same schools."

CINCINNATI, OHIO.—The Forty-Second Annual Report for the school year ending June 30, 1871, lately issued, gives much interesting statistical and other information concerning the Common Schools of Cincinnati. The system embraces three classes of schools, known as District, Intermediate, and High Schools which are thoroughly graded. The Normal School, now in its sixth year, appears to be doing a good work. Of its seventy-four graduates, sixty-four are employed in the city schools, and according to the report of Principals, are much more successful than those employed without any special preparation. The Report contains the usual statistics from which we quote: number of District Schools, 26; Intermediate Schools, 3; High Schools, 2; total number of pupils registered in all the schools, 27,140; the average number belonging, 21,878; average daily attendance, 20,893, or 95.5 per cent. of the average number belonging; average number of teachers employed, 507, an increase of 57; whole amount paid for tuition, day-schools, \$409,753.92; night-schools, \$8,475.89; total, \$418,229.81; total expenses, including tuitions, buildings, salaries of officers, etc., \$717,969.43. "The average daily attendance, or the number of pupils enrolled, is perhaps the best test of the workings of a school system that statistics can give. By it the permanent interest and confidence of the pupils in their public schools may be pretty accurately measured; and judging by this standard, we may congratulate ourselves that Cincinnati is not excelled by any other of the large Western cities, and by not more

than one or two in the Union." As an indication of the relative cost of the different grades of instruction, the following is of peculiar interest: Total cost of instruction per pupil, District schools (18,977 pupils) \$20.42; Intermediate schools (2,026 pupils) \$29.46; High schools (631 pupils) \$53.45.

PHILADELPHIA, PENN.—The Report for the year 1871 gives the total number of pupils enrolled in the public schools as 87,428, of whom 6,353 were registered in the night schools. There were employed in the day schools 1,505 female teachers and 79 male teachers. The total expenditures were \$1,370,457, of which \$883,151 were for salaries. The report favors the compulsory education of vagrant children of whom there are over 20,000.

THE FREEDMEN'S AID SOCIETY of the Methodist Episcopal Church has supported, during the past year, 35 schools, which employed 75 teachers. There are under its care 10 colleges and 4 Biblical schools. The amount of property invested in literary societies by the Society is \$175,000, against which there is an indebtedness of only about \$6,000.

LONDON, ENGLAND.—The Committee appointed by the London School Board to collect statistics with regard to the state of elementary education in the metropolis, and to consider what provision should be made to supply the deficiencies, presented, on March 27, a very satisfactory and interesting report. It appears from the last census, that on April 2, 1871, the population of London was 3,265,005; that the number of children between the ages of 3 and 13 was 681,101, of whom 97,307 were being educated at home, or in schools where the weekly fee exceeded ninepence, and 9,101 were inmates of institutions; and that the number of children remaining and belonging to the class which require elementary schools was 574,693, of whom 176,014 for various causes, were not attending school. Of this last number, a careful examination shows that 80,039 have no reasonable excuse for non-attendance at school. If to these we add the number registered at elementary schools, we have as the gross total of children for whom elementary schools should be provided, the number of 478,718. On the subject of

"Available Accommodation," the report says: "At the present moment, there are in the metropolis 1,149 efficient schools accommodating 312,925 scholars; and 250 schools efficient in buildings or instruction alone, accommodating 37,905 scholars, *i. e.* on the whole; 1,399 schools completely or partially efficient, with a total accommodation for 350,920 scholars." Under the head "Accommodations to be provided," the committee arrived at the conclusion that the schools for 478,718 children should have accommodations for 454,783 in average attendance. The report concludes by urging the additional accommodations needed be immediately provided in accordance with a plan presented. The suggestions of the Committee will doubtless be acted upon without delay to the great advantage of educational interests.

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#### CURRENT PUBLICATIONS.

A GOOD Dictionary of American Biography, embracing living as well as dead men, has been long a desideratum. Various attempts, none of them very satisfactory, have been made to supply the want. The American Biographical Dictionary of the venerable Dr. William Allen, in its various editions from 1809 to 1857 was, for its time, perhaps, the best, but it was full of all manner of oddities and crudities; the career of every prominent man, and his failure or success in life, being stated, in accordance with the venerable Doctor's somewhat narrow views. Blake's Dictionary, not exclusively American, was better, but was conspicuously inexact in its dates and wonderful for its omissions. A year ago, a work appeared, long heralded, and, as we had occasion to know, for twenty years in progress: "Thomas's great Biographical Dictionary," in two ponderous octavo volumes; and large were our expectations from it, but again we were doomed to disappointment. The sketches were meagre, partial, not generally brought up beyond 1855, unless they happened to be men of Philadelphia birth or residents of that city; and occasionally long criticisms on the writings of the men celebrated, appropriate in a dictionary of authors, but strangely out of place in a biographical dictionary, were introduced, to the exclusion of details of facts which were desirable. And now comes

Mr. Drake (1) with his Dictionary of American Biography, to attempt again the supply of our needs. His Dictionary is certainly more portable than Thomas's; his sketches are not so meagre, and he has been less partial; but having said this we have said all, that we can consistently say, in his favor. He has been guilty of a glaring impropriety in his second title,—“including Men of the Time”—for he could not but be aware, that there is a Biographical Dictionary of Living Men, of that precise title—“*Men of the Time*”—(of which, by the way, we see a new and carefully revised edition announced) which he had not, and in the nature of the case could not, *include* in his volume, and yet the intention of this title is, obviously, to give the impression that he had done that very thing.

Mr. Drake is yet a young man, and though the son of an eminent genealogist, has still much to learn in the construction of a biographical dictionary. We say this advisedly, and with a full knowledge of the labor necessary to the production of such a work. That this labor is far greater than is imagined by any one who has not attempted it, we willingly admit, and it is often greatly increased by the blunders, and second-hand information, given by professedly biographical works. Mr. Drake's Dictionary is in no respect a work of original research. He has drawn very largely upon the “New American Cyclopædia,” “Allibone's Dictionary of Authors,” “Duyckinch's Cyclopædia of American Literature” and his “Cyclopædia of Biography,” “Sprague's Annals of the American Pulpit,” “Lossing's Eminent Americans,” and Messrs. Appletons' “Annual Cyclopædia;” from the last named almost invariably without credit. He has also forged liberally from the newspaper sketches of eminent men; a source of information, which he will learn, if he has not already, is too full of errors to be trusted without careful verification. We presume there are instances in which he has applied directly to the parties themselves or their friends, for the authentic facts of their life history, but from a pretty careful examination, we are inclined to believe that the number of such cases cannot be large. The work has evidently been thrown together, on the principle of making a book with the least amount of labor, which would enable it to pass for a biographical dictionary.

Not thus should, or will the “Biographical Dictionary” of the future be prepared. The names which are to be honored with a place in *that* record, will be carefully selected,

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(1) DICTIONARY OF AMERICAN BIOGRAPHY; INCLUDING MEN OF THE TIME; containing nearly ten thousand notices of persons of both sexes, etc. By FRANCIS S. DRAKE. Boston: J. R. Osgood & Co., 1872.



treated without sectional, local, or political prejudice, and every available means of obtaining the exact facts of their history, will be brought into exercise to secure it. If they themselves are living, they will be appealed to for the items of their public or private life; if they are dead, the investigation will be prosecuted in their families or among their friends, and no sketch from any other source will be accepted till it has been carefully verified in all its particulars. This may lead to the rejection of obscene and unworthy names, of which so many are foisted into our biographical works; it will entail a great amount of labor upon the author, but when it is finished it will be a standard work. Until such a work shall have been prepared we *may* have to make shift with works like Mr. Drake's, which only tantalize and disappoint us.

MESSRS. IVISON, BLAKEMAN, TAYLOR, & Co. have published "An Elementary Manual of Chemistry," abridged from Elliot & Storer's Manual, with the co-operation of the authors, by Wm. Ripley Nichols. It is well illustrated, pp. 350. Also "An Elementary Grammar of the Greek Language," with exercises and vocabularies, by Samuel H. Taylor, LL.D. It is based on the twenty-fifth edition of Kühner's Grammar.

MESSRS. J. B. LIPPINCOTT, & Co. have just published "The Science of Wealth," a Manual of Political Economy, embracing the laws of trade, currency, and finance, condensed and arranged for popular reading and use as a text-book, by Amasa Walker, LL.D. 454 pages.

No. III of the Student's Series of Classic French Plays, now being published by Messrs. HOLT & WILLIAMS, is "Le Misanthrope," a comedy by Molière. It is edited, with explanatory notes for the use of students, by Edward S. Joynes.

MR. JOHN J. ANDERSON, author of several school histories, has just published "The United States Reader," embracing selections from eminent American historians, orators, statesmen, and poets, with explanatory observations, notes, etc. It is intended to be a complete "class-manual" of United States history. A vocabulary of difficult words and a biographical index of authors is added.

THE RIVAL COLLECTION OF PROSE AND POETRY, is the title of an excellent manual for reading and recitation in the school and family, and also at public exhibitions.

EX-PRESIDENT WOOLSEY is at work on a text-book of political economy.

## MISCELLANEA.

A LIST of Eminent Foreign Teachers who died in 1871 will appear in *The Am. Educational Monthly* for July.

MR. O. H. FETHERS, of St. Louis, is to give instruction in Voice Culture and Reading at Teachers' Institutes, in Ohio and Indiana during the coming season. Applications may be addressed to him at 407 N. 4th St., St. Louis, Mo.

AT GENEVA, this summer, on the occasion of the Congress of Schoolmasters to be held in that city, July 27—August 5, there will be exhibited a collection of school manuals, maps, plans, globes, school furniture, and other materials used in the work of instruction, not only in Switzerland, but in other countries as well.

THE PHONETIC system of spelling has been adopted in the public schools of Iowa; we suppose now the "young ideas" will spell the name of their State, Ioa.

MONTREAL has a policeman who can arrest a prisoner in nine different languages.

## PUBLISHERS' DEPARTMENT.

**Special Notice.**—The price of Venable's School History of the United States, and Thalheimer's Ancient History, (See Wilson, Hinkle & Co's. announcement,) are as follows:

Venable's United States: Retail price, \$1.25; single specimen copy for examination, with a view to introduction, sent by mail, post-paid, on receipt of 85 cents. Thalheimer's Ancient: Retail price, \$2.50; single specimen copy for examination, by mail, post-paid, \$2.00; or by express, \$1.67.

Liberal terms on supplies for first introduction. The United States History, will be ready May 15th, and the Ancient History very shortly thereafter.

**A New Health Monthly.**

The Science of Health, a new first-class magazine, is to be published at the office of the Illustrated Phrenological Journal. It will be devoted to all that pertains to the Preservation of Health and the Hygienic Treatment of Disease. It will teach the right use of nature's remedial and hygienic agents, being air, light, temperature, diet, bathing, exercise and rest, electricity, etc. There is no subject of more vital interest to teachers than this. You need the knowledge for yourself and pupils. Special terms are made to teachers for The Science of Health, sent on application. Specimen number sent to teachers free, on receipt of stamp for postage. See prospectus on another page. Address: S. R. WELLS, Publisher, 389 Broadway, New York.

It will be welcome news to all connected with young ladies' schools, to learn that Mr. U.

C. Burnap and Dr W. J. Wetmore have prepared a book of Trios and Quartets for ladies' voices, consisting of Music of the very highest artistic excellence, embracing the best compositions of the great masters, written especially for ladies, together with many valuable arrangements. The classic trios of Mozart and Beethoven, the elegant compositions of Rossini, the gems of Gounod, Campana, Wagner, Fabiani and Curschman, together with some admirable selections from the sparkling Operettas of Offenbach, and a choice collection of Sacred Music, all hitherto unobtainable except in sheet form, and at great expense, will be found in the **Athenaeum**, arranged with pleasing words. The great desideratum of suitable music for part-singing in festivals, and on commencement occasions, will be fully met by this work.

No pains nor expense have been spared to bring within the reach of all the very best compositions extant for female voices, and while specially adapted for use in the school room, it will be found a valuable repertoire for artists and amateurs who have the arranging of concert programmes.

The reputation of the compilers is good assurance that the tone of the book is of the very highest. We feel confident that it is destined to exert a wide and beneficent influence on the musical taste of young ladies throughout the land.

It is expected to be ready about the 10th of August. The publishers are

J. W. SCHERMERHORN & Co.,  
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# Aids to School Discipline:

## A SUBSTITUTE FOR School Records, Reports, and Prizes.

NEW AND APPROPRIATE DESIGNS, PRINTED IN COLORS.

AN accurate register of deportment and scholarship promotes healthy emulation. Yet such a register is rarely kept. Teachers cannot record each recitation as it occurs, hence the record is neglected for the time, and afterward made from memory. *Perfect accuracy being impossible, confidence in the record is weakened and its moral force lost.* The Aids secure the good results of accurate records and reports, with less expense of time.

The Aids naturally and inevitably awaken a lively paternal interest, for the pupil takes home with him *the witness of his daily conduct and progress.*

The Aids may be used in various ways. This is convenient: In the morning give each pupil a Card (5 merits), representing a *perfect day*, to be forfeited for misdemeanor, or failure in recitation. Single Merits and Half-Merits are for pupils who fail to retain their Cards and yet are worthy of some credit. Five Cards held by any pupil are exchanged for a Check (25 merits), representing a perfect *School Week*. Four Checks are exchanged for a Certificate of Merit, representing 100 merits, or a perfect *Month*. These Certificates bear the pupil's name, and are signed by the teacher. The number held shows the pupil's standing.

If prizes or medals are awarded at close of session, there can be no mistake in determining to whom they belong: the decision being made by each pupil exhibiting his Cards and Certificates, no idea of favoritism can arise.

It is needless to discuss the value of proper incentives, for either children or adults. The use of Millions of these Aids, with the unbounded approval of Teachers, Parents, and Pupils, assures us that they are doing great good.

They are neat in design, printed in *best* Colors. The Certificates are prizes which pupils will cherish. Single Merits and Half-Merits are printed on card-board; Cards and Checks on heavy paper, and may be used many times—hence the system is *cheap*. They are put up in sets of 500, there being 80 Certificates, 120 Checks, 200 Cards, 100 Single Merits and Half-Merits. Price, per set (mailed) \$1.25.

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Single Merits, per hundred..... .15  
Cards (fives) per hundred..... .15

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Checks (twenty-fives) per hundred, .40  
Certificates (hundreds) per hundred, .60

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| No. 1, size, $1\frac{1}{2} \times 2\frac{1}{2}$ , in one color, for day-schools, | - - - | per hundred | 0.30 |
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| " 8, " $2\frac{1}{2} \times 4\frac{1}{2}$ , illuminated, " day-schools,          | - - - | "           | 2.00 |
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| " 10, " $2\frac{1}{2} \times 4$ , in one color, " " " "                          | - - - | "           | .67  |
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# The School Index, or "Roll of Honor."

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Act well your part, there all the honor lies."*

To teachers who keep a record of the work performed by their classes, and are weary of writing out, week after week, the names and relative merits of each of their pupils, the SCHOOL INDEX will be welcome, on account of the ease with which, by its aid, they can accomplish what has hitherto been an arduous task. Its construction is clearly illustrated in the accompanying cut. It consists of a frame in which are arranged small pieces of wood, on which the names of the pupils are to be written. These can be taken out and moved at pleasure. One side of the frame is hinged to admit of its being opened when any change in the position of a name-strip is required. On the other side, which is boxed, are numbers, as shown in the cut.

In connection with the **Aids to School Discipline**, the **School Index** furnishes an accurate and reliable means of showing the standing of every pupil. The "Aids" and the "Index" together, form a perfect System of School Records. At the expiration of a "quarter" or any specified time, each pupil produces his Cards and Certificates, and his rank being determined by the number of these in his possession, his name can easily be put in its proper place in the Index. If any error in arrangement is discovered, it can be easily corrected. In this respect, the superiority of the School Index over the ordinary **Merit Roll** is readily seen. Where the Aids are not used, the Index can be made to take the place of the "Merit Roll" or "School Record,"—the preparation of which has always caused a waste of much valuable time and effort.

The Index may be used to show the standing of each pupil as to scholarship alone, or scholarship together with deportment and attendance. As it is to be displayed in a prominent place, where it can be seen and examined not only by the pupils but by parents and others who visit the schools, it will necessarily have a beneficial influence on the conduct and diligence of the classes.

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The **School Index** is simple in construction; easily managed; can never get out of order, there being no "machinery" whatever about it; can be introduced without making any changes in the manner of governing or marking; is neat in design; and is light, portable, and cheap.

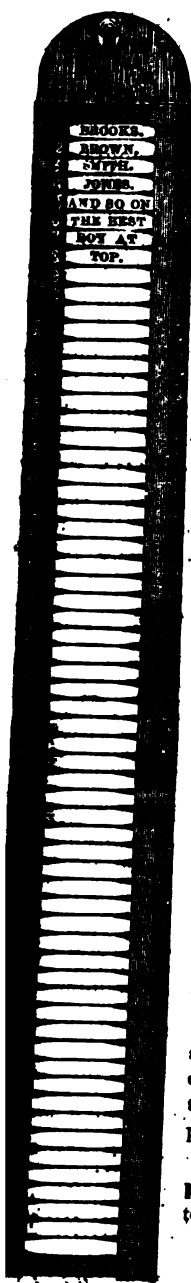
Wherever introduced, its use has been attended with the **happiest results**, and has called forth the praise of experienced teachers.

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It is mounted in a light and durable manner, strong brass mountings, inclined axis, on a neat black walnut stand.

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## A photograph of a wooden stand holding several globes and a map. The stand is made of light-colored wood and has a flat top surface. On the stand, there are three globes of different sizes and a rectangular map. The globes are made of a material with a woven or textured pattern, possibly paper or fabric, and are mounted on metal stands. The map is a rectangular piece of paper with a similar woven pattern, showing a world map. The background is a plain, light-colored wall.

Are now rapidly finding a place, hitherto unoccupied, in every grade of school, from the primary to the University. They are deemed indispensable in every well-furnished school-room. Their varied uses as "Spherical Blackboards," make them as popular among Teachers and as much a necessity to intelligent teaching as common flat blackboards.

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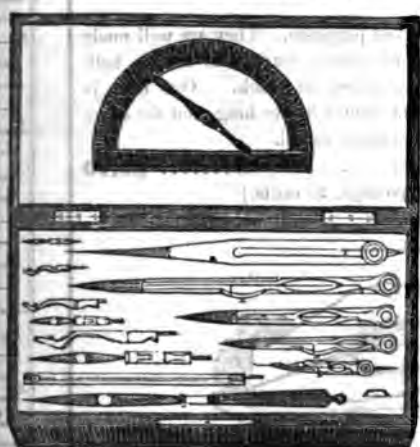
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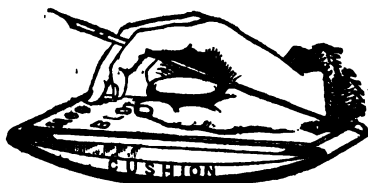
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Yours truly,

D. B. ALLEN.

**How to Do It!**

COVERT, March 18th, 1872.

MR Editor—On the ninth day of January last, a copy of Wood's Household Magazine strayed into the Covert Post-office, and our Post-master, Mr. D. B. ALLEN, who is also Superintendent of our Sabbath School, in glancing over the contents, noticed the offer to any Club, Lodge, or Sabbath School, of a Smith's American Organ, for the price of the instrument in subscriptions to the Magazine. Here, thought our Superintendent, is our opportunity; we need an Organ, and we need good reading, why may we not have both? The price of the Magazine is One Dollar per year, and for one hundred and twenty-five subscribers we can have a No. 1 Organ, price \$125. With characteristic promptness he presented the matter to the school next day, and, though the scheme appeared visionary to the most of us, the ball was set in motion, and it was not suffered to rest until one hundred and fifty-three names were obtained, which, with the addition of twelve dollars in cash, entitled us to a Smith's American Organ, style No. 3, price one hundred and sixty-five dollars. The list, with the cash, was sent to the publishers, the Organ was promptly forwarded, and last Sabbath its powerful tones filled our place of worship for the first time. We can cheerfully testify to the reliability of the publishers of Wood's Household Magazine. They give us our money's worth of valuable reading, and in addition, a first-class Cabinet Organ, and we will further say to all Clubs, or Societies, that are in want of an instrument, first find a leader who has go in him, then go and do likewise.—O. S. S.—[From the *Sentinel*, South Haven, Mich., for March 30, 1872.

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# AMERICAN EDUCATIONAL MONTHLY.

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JULY, 1872.

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In this design two entrances are provided in front, each of which opens into a room which is at once an entry-way and a lobby for clothes. The space between the two entry-ways can be used for recitations, and a room may be finished in the basement, or added to the rear, for the storing of fuel.

The design is well adapted to districts in which the attendance is large during one portion of the year and small at other times. The recitation-room gives an opportunity

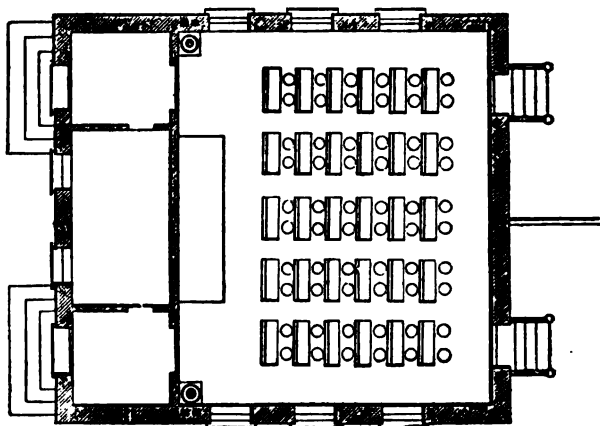


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\* From *Johonnot's Complete Work on School Houses.*

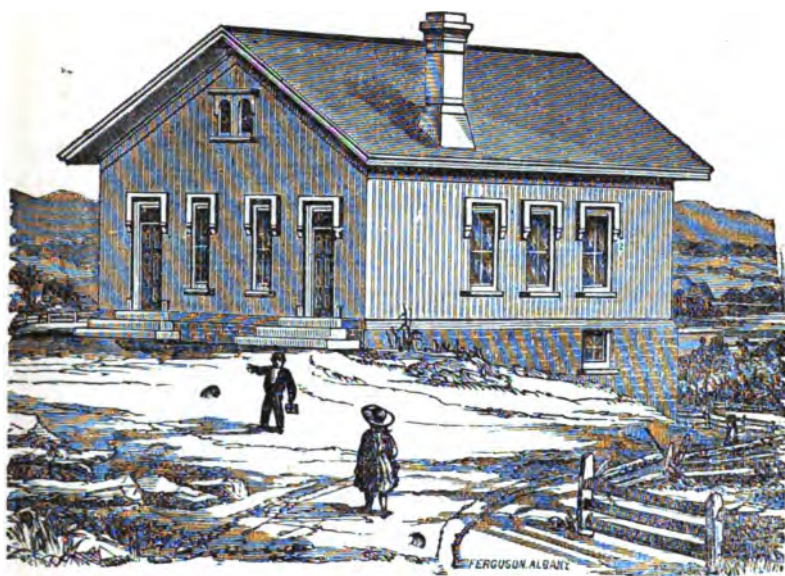
for the employment of an extra teacher when the school is crowded. The front and back walls of the school-room, between the two doors, should be occupied by blackboards. The stoves are placed in the front corners of the room and the ventilators in the opposite corners. This room is supplied with two back entrances opening respectively into the boys' and girls' play-grounds.

ELEVATION No. 1.—This elevation represents a plain but neat and substantial building of wood. The roof has the plain, wide, projecting cornice and eaves which protect the



GROUND PLAN.

walls of the building, and at the same time give it an appearance of comfort and solidity. The finish may be of battens, as in the engraving, or it may be of clap-boards, or substantially the same building may be made of brick. This elevation is represented as standing on a hill-side which slopes downward and backward from the house. In situations of this kind the back entrance may be omitted, and the basement may be fitted up for a wood-room. The nearly square form of this elevation, the perfectly plain finish, the arrangement of everything beneath a single roof, and the entire lack of ornamentation, render this one of the cheapest buildings which can be erected. If anything cheaper is attempted it will be by the use of poor materials, by scrimping just proportions, or by diminishing the size, so as to deprive pupils of their due proportion of pure air, and



**Elevation 1.**

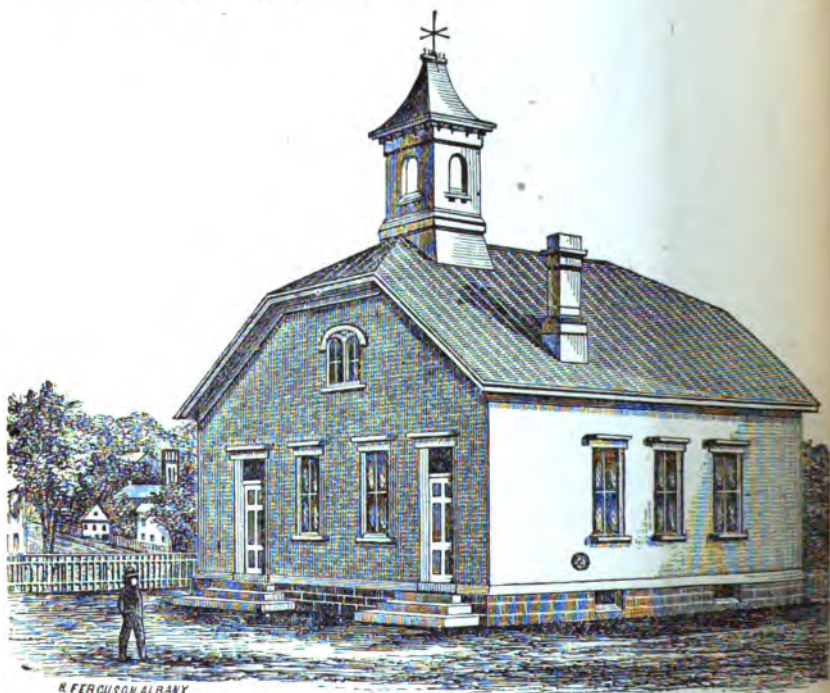


**Elevation 2.**

of their freedom of movement. In either case the interests of the school will suffer, and present saving will be effected at a fearful future cost to the children.

ELEVATION No. 2.—This is another very plain and cheap structure of wood, finished with clap-boards. The bell-tower gives dignity to the building, but it may be omitted. The roof is the ordinary pitch and may be covered with slate or shingles.

In finishing wood structures in this manner, the clap-boards should be laid with but little exposure to the weather. This arrangement gives tighter joints, and makes the building much warmer. In some sections buildings designed for habitation are covered with a coating of tarred paper before the siding is laid, and this renders them almost air-tight. This covering is recommended for school-houses built in our northern climate, and in exposed locations. By its use the school-room will be made more comfortable, and a large saving in fuel will be made.



Elevation 3.

ELEVATION No. 3—This building, in form, is but a slight variation from No. 2. The corners of the gables have been cut off and the form of the cupola changed; but otherwise it is substantially the same. The finish in the engraving is made to represent brick, but wood or stone may be used.

In the erection of brick walls care must be taken to have the walls hollow, or formed so that a space of air may be confined within them, otherwise the walls will be damp and the room unhealthy. The precaution should also be taken to have the foundation laid in hydraulic cement as high as the water-table to prevent the moisture of the ground from permeating the entire walls of the building. The effect of the moisture is not only deleterious to health, but combined with the action of frost, it has a tendency to crack and destroy the walls of the building.

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### A FEW COMMON MISTAKES.

THE most popular bone of contention among the philologists of the day seems to be what Mr. Richard Grant White calls "the incongruous and ridiculous form of speech," *is being built*. We are of the opinion, however, that it has been pretty conclusively shown by Mr. Fitzedward Hall, in his essay in the April number of *Scribner's Monthly*, that we may use this expression without being in danger of sinning against "the genius of the English tongue."

But while the philological feud is raging in this quarter, and our modern Gamaliels are settling for us these "weightier matters of the law," may we not as well take ourselves to task for some of the smaller offences of pen and tongue by which we are continually doing violence to the proprieties?

Steering clear of the field of participles passive where the big guns are booming, let us bring our light artillery to bear first upon an intruding letter which often shows itself in places which it has no right to occupy. We mean S following the apostrophe in the possessive case of nouns ending in that letter. As, for instance, in "Barnes's Notes." In

this position the letter in question must always be regarded as an interloper. We notice this mistake in nearly every newspaper or magazine at which we glance, and it is hardly fair to printers and proof-readers to suppose that the blame rests solely with them.

Let us next have a shot at expressions such as "those sort of people," used almost universally in common conversation, and occurring frequently in the works of authors of experience and culture. When one is caught in a blunder, it is very soothing to find that one has good company, and a plenty of it. A moment's thought, however, will convince any of us of the impropriety of joining a plural adjective pronoun with a singular noun.

Another error, of which the most precise of us are often guilty in our careless moments, is that of using the superlative degree in making a comparison between two things. Unless one is grammatical by instinct it is natural to say *the best* rather than *the better*. And we Americans are by no means alone in this abuse of the king's English. Our quill-driving cousins across the Atlantic are no less frequent offenders.

We should feel it almost an insult to the reading and writing public to call attention to such an egregious blunder as "*you was*," had we not recently met with it repeatedly in a novel coming from one of the leading publishing houses in New York, the author having in this book arrived at his twelfth volume. These stories are said to be moral and popular, and deserving of a place in every household. What a pity, then, that good morals should have been combined with such very bad grammar!

One of our weekly papers of a recent date, remarks, that "an over-squeamishness about words is not a sign of mental healthfulness. We hope we have not rendered ourselves liable to condemnation on this score.

D. D.

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THE MOST stupendous canal in the world is one in China, which passes over two thousand miles, and to forty-two cities; it was commenced as far back as the tenth century.



*MIXED SCHOOLS.*

## PART II.

**S**Ocial SUPERVISION.—That young people need no social supervision—no teaching in regard to their relations to each other and to society—and may be left to their own impulses, as some people gravely assert, is most absurd. If the hand needs to be taught to knit or to sew, and the brain to solve its problems in arithmetic, and in philosophy, just as much, yes, a hundred times more do we need experienced teachers to aid us to solve the problems which social life forces upon us. Man, without teaching, is a savage. We inherit only a capacity for civilization. In this civilizing process shall we disregard the social nature and leave it to follow its own impulses? But “the social nature must be taught in our homes,” it is said. In what homes? We have some noble homes in which the amenities of social life are not forgotten; but those who have taught long in our schools and have watched our social panorama are forced to reiterate “what homes?” Some say, “we learn by imitation.” Aye, some of our millionaire models New York jails should absorb, and courts of justice should call to account. The persons most patent, at this epoch, to the eyes of the young are not fit models for imitation. There are multitudes of half educated young people—orphans, commercial orphans, whose parents are dead and buried under mountains of effort at accumulation, which see no other social models than those placed before the public eye; the tawdry heroes of fiction in our weekly newspapers; the dishonesty and rottenness that desecrate our political arena.

Intellectual culture, and moral and social culture are different, as we sometimes learn to our cost. A cultivated intellect enables a man to strike that balance between the rights of individuals of the human family, which creates law, but it does not oblige him to live up to that law. Knowledge is power, but it may prove a wall of offence as well as a wall of defence. We speak of secular as opposed to sectarian education, but by secular we certainly do not mean irreligious education—education which ignores all moral growth.

Those principles which lie equally at the foundation of our Christian religion, and of our Christian civilization, must be taught and rigidly taught in any school which has claim to a performance of faithful work. We have no right to leave the young and the weak in our schools, without those safeguards which every wise parent places about his children. It is one thing for teachers to select excellence and give it higher polish, and another to make that excellent which might otherwise have been evil. "Trust your pupils' honor," it is said. Very well, can we trust their judgment also? Have they no claim upon those placed over them as teachers for the guiding of their maturer judgment? Our schools are not reformatory, we say. Very true, but on the other hand, ought they not to be so well disciplined that those who enter them pure, shall not risk of going from them in need of reformatory schools? As the school increases its numbers, rendering it more impossible to give special guidance to individual pupils, it grows only the more necessary to place about them the ægis of wise regulations which shall shield them from temptation. There is no sectarianism in a high toned sense of right, and even our State schools can and must place their moral teaching on a Christian basis. This can be done without interfering with the faith of the most bigoted sectarian.

Where such instruction and oversight are made all that they ought to be to the students of a college, the difficulty of admitting ladies on the same footing as gentlemen is disposed of. But to make it what it should be, where ladies are admitted, there should be ladies, mature and judicious, either among the corps of instructors, or in some position which will at least give them advisory power on subjects connected with the moral and social condition of the school. Woman alone possesses that ready insight on moral and social points, which fits her for such work, which makes her the preserver of the world's purity. When social rout and demoralization occur, the appearance of a ready judicious woman on the field is like the coming of Sheridan to Winchester. "What was done, what to do," is the result of one sweeping glance. But however decided these intuitions may be, unless power and responsibility be placed in the



hands of such women, they result merely in an indifferent opinion or a private sorrow. There was never an era nor a country where such women were needed at the front as advisers and instructors more certainly than they are needed now and here. It is not right that some judicious women should shut themselves out of sight at such a time. The more vice and recklessness pour out their rampant clamor, the more necessary it is that such women should come forward and stretch a quiet self-reliant hand to the aid of those struggling up the hill of life. And in doing this there is no need that they should give up those qualities which fit them especially for this work.

Those who labored for the "Sanitary Commission" during the war, were not loud-voiced, boisterous women. They labored faithfully through those sad days with clear vision and firm, tireless hands, but they gave up no whit of womanly dignity. They are the weak women, not the strong and thoughtful who fill the moral sewers of the world. Is there no need that these sanitary workers should still stretch out their health-imparting hands now that the war is over? The war that needs them is not over. The battle that sees brave hearts go down and fair lives trampled out is never over.

MRS. H. E. G. AREY.

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*OCEANIC CIRCULATION.*

"THE greatest problem of terrestrial physics," as Sir John Herschel termed the cause of the ocean-currents, is now eagerly discussed by the scientific world. The means at our disposal are so ample and thorough to investigate and collect facts bearing on this question, that an indisputable theory will soon be established to account for phenomena which, apart from the natural curiosity they must ever excite, have so much to do with life on this globe. Our own country, taunted too often for its devotion to mercantile and commercial matters, has been among the foremost to investigate and collect facts bearing on this matter. So long ago as 1828, Humboldt, in an address

before the Imperial Academy of St. Petersburg, commended the United States for its exertions in this direction. The labors and data of Maury, and of our Coast Survey, are taken as valuable guides throughout the world. Our position on the continent, surrounded with the immense field over which these phenomena can be observed, is peculiarly favorable to an acquaintance with them.

What are the facts, the phenomena?

There is little dispute about these; it is only on the *cause* that there is any serious difference of opinion.

That there are currents which constantly flow from the equator in a northeasterly direction, bringing the warm equatorial waters toward the polar regions, is incontrovertible. We can observe them; we can even measure their rate of speed; we can test their waters with the thermometer.

The fruits of Mexico have been washed ashore on Northwestern Europe; and a recent traveler tells us that the people on the shores of Norway have been in the habit of picking up a bean, which they superstitiously regard as a charm in the labor of childbirth. This bean we know to belong to Mexico. The evidence is complete on this point.

We observe that the lines of equal mean annual temperature, instead of showing any tendency to coincide with the parallels of latitude, run up into the North Atlantic, and into the North Sea, in the form of a series of loops; an examination of any physical map on which isothermal lines are marked will at once show this. The phenomenon is not confined to the North Atlantic; a corresponding series of loops, though not so well defined, passes southward along the east coast of South America; and a very marked series occupies the angle of the Pacific off the Aleutian Islands and the coast of California. But the temperature of the North Atlantic is not only raised greatly above that of places on the same parallel of latitude, having a continental climate by the interchange of tropical and polar water, it is greatly higher than that of places similarly circumstanced as to a general interchange of water in the Southern Hemisphere. Thus the mean annual temperature of the Faroe Islands, latitude  $62^{\circ} 2'$  north, is about  $45^{\circ}$  Fahr., nearly equal

to that of the Falkland Islands,  $52^{\circ}$  south, which is  $47\frac{1}{2}^{\circ}$  F. The temperature of Dublin, latitude  $53^{\circ} 21'$  north, is  $49\frac{1}{4}$  F.; while that of Port Famine, latitude  $53^{\circ} 8'$  south, is  $41\frac{1}{4}$  F. Yet more remarkable is the variation between places on the same parallel in the Northern Hemisphere. Halifax, in latitude  $44^{\circ} 39'$ , has a mean annual temperature of  $43^{\circ}$  F.; and Dublin, in latitude  $53^{\circ} 21'$  has  $49\frac{1}{4}^{\circ}$  F. We thus arrive at the well-known general result, that the temperature of the sea bathing the northeastern shores of the North Atlantic is greatly raised above its normal point; and the same, in a less degree, is the case with the northwestern shores of our continent.

The members of the late German Arctic Expeditions have observed that when the warmer blue waters moving from the southwestward meet the impure waters of the Spitzbergen and East Greenland currents, there is a line of demarcation very distinct, which would indicate that the Atlantic water here dips down beneath the specifically lighter water of the ice-bearing current—a conclusion which is supported by the increase of temperature with the depth beyond this point.

If there be this movement of equatorial waters to the polar regions, which is now undeniable, there must be, to preserve the equilibrium, a counter-movement from the north to the equator, and this has recently been demonstrated by many practical experiments. The most remarkable investigations ever carried on upon the ocean-currents and temperature have been recently made in two British ships—the *Lightning*, in 1868, and the *Porcupine*, in the summer of 1869. The latter vessel was sent out on three cruises, and the results of their trials have startled the scientific world, not only by the remarkable change of temperature observed, but by the evidences of animal life they found at depths which it was not believed could contain any life.

In the second cruise of this vessel, in the northern extremity of the Bay of Biscay, two hundred and fifty miles west of Ushant, a depth of twenty-three hundred and forty-five fathoms was reached and examined. This depth was nearly equal to the height of Mont Blanc, and exceeds, by five

hundred feet, the depth from which the Atlantic cable was recovered. It was unmistakably proved that as you descend the thermometer falls, and as low as  $33^{\circ}$  has been registered, while at the surface it was  $67^{\circ}$ . Examinations carried on in a similar way in the Mediterranean gave no lower temperature than  $54^{\circ}$ .

Still more startling were the observations made in the third cruise, between the north of Scotland and the Faroe Islands. There were actually found, within twelve miles of each other, two distinct climates beneath the Atlantic. In one part there was a temperature of  $32^{\circ}$ , while none less than  $46^{\circ}$  could be obtained in another. At the surface there was a temperature of  $52^{\circ}$ , and a fall of three to four degrees took place in the first fifty fathoms. These results are now exciting wonderful attention, and, on account of a new improved thermometer to resist the pressure of the water, which is in some places three tons to a square inch, they are absolutely certain. Formerly it was laid down as certain that there was no temperature less than  $39^{\circ}$  at deep-sea bottom, but that was occasioned through the fault in the manner of registering, which gave the temperature much higher than it really was.

Captain Maury demonstrated in another way the existence of an under-current from the north. An apparatus constructed by him of a block of wood, sunk by weights, and attached by a line to a small, floating barrel, moved off in a southerly direction against wind, and sea, and surface-current. And we all know that icebergs take a southerly direction, which can only be accounted for on the supposition of an under-current from the arctic regions.

It is, therefore, admitted on all sides that there is this interchange of water between the polar and equatorial regions; but the difference is rather upon the true cause of this circulation.

It is apparent from the motion of the earth from west to east, and on account of the waters starting from the equator, where their velocity is greatest, that the currents will take a northeast and a southwest direction; those from the equator will go in a northeast direction, and the arctic currents in a southwest direction. But what causes this circu-

lation? That there is a large body of water conveyed by the Gulf Stream is on all sides admitted ; it is only on the absolute quantity that there is any disagreement. Some maintain that the Gulf Stream brings all the warm water from the tropics which affect northern climates, while others, admitting it carries off these warm waters, deny it has the power to modify our northern climate to the extent claimed.

The ultimate source of the Gulf Stream is, undoubtedly, as has been specially insisted upon by Sir John Herschel, the equatorial current of the Atlantic, the drift of the trade-winds.

Mr. Croll, in the *Philosophical Magazine* for February, 1870, calculates the Gulf Stream to be equal to a stream of water fifty miles broad, one thousand feet deep, and flowing at the rate of four miles an hour ; he further estimates that it conveys as much heat to the northern parts of Europe as is obtained by the whole arctic regions from the sun.

Others deny that there is such a quantity of water in the Gulf Stream, and believe it is only a portion of the great equatorial flow toward the north. They maintain that other causes, far more potent, produce the interchange of water between the tropical and arctic regions.

Dr. William B. Carpenter, who has devoted many years to research on this subject, and who made those experiments in the Porcupine, read a remarkable paper before the British Association at its last meeting. In this paper he accounted for the phenomena by a theory that commanded the general assent of the learned men present at that meeting, and which has been very favorably received by the scientific world. He maintains that the true cause of oceanic currents is to be found in the arctic regions, where, the water being cold, and by a well-known physical law more dense, will sink, and thus cause a motion of the waters from warmer regions to fill its place. He further demonstrated this by a novel and beautiful experiment by conducting water of different temperatures through a tube. He acknowledges that the Gulf Stream conveys water toward the polar regions ; but argues that it by no means can give the high temperature to northern latitudes. The late

Sir John Herschel gave to the winds the entire right of setting the ocean-streams in motion ; but in a letter, which is supposed to be the last he ever wrote, he accepts the theory of Dr. Carpenter. This letter was published in *Nature* of May 25, 1871. We here give a copy of it :

“ COLLINGWOOD, April 19, 1871.

“ MY DEAR SIR: Many thanks for your paper on the Gibraltar Current and Gulf Stream.

“ Assuredly, after well considering all you say, as well as the common-sense of the matter, and the experience of our hot-water circulation-pipes in our greenhouses, etc., there is no refusing to admit that an oceanic circulation of some sort must arise from mere heat, cold, and evaporation as *vera causa*, and you have brought forward with singular emphasis the more powerful action of the polar cold, or rather the more intense action, as its maximum effect is limited to a much smaller area than that of the maximum of equatorial heat.

“ The action of the trade and counter-trade winds in like manner cannot be ignored ; and henceforward the question of ocean-currents will have to be studied under a twofold point of view. The wind-currents, however, are of easier investigation. All the causes lie on the surface ; none of the agencies escape our notice ; the configuration of coasts, which mainly determines their direction, is patent to sight. It is otherwise with the other class of movements. They take place in the depths of the ocean ; and their movements, and directions, and channels of concentration, are limited by the configuration of the sea-bottom, which has to be studied over its whole extent by the very imperfect method of sounding.

“ So, after all, there *is* an under-current setting outward in the Straits of Gibraltar.

“ Repeating my thanks for this interesting memoir, believe me, dear sir, yours very truly,

“ J. F. W. HERSCHEL.”

Another very plausible theory of oceanic circulation was based on *atmospheric pressure*. It is known that, at some parts of the earth's surface, there exists an atmospheric pressure capable of sustaining a column of mercury in the barometer of upward of thirty inches in height ; at the same time there are certain areas over which this pressure is only such as to raise the barometric column to a little over twenty-nine inches. Now, if we compare the difference of

absolute weight sustained by two such areas, we shall see that, in the space over which the higher atmospheric pressure exists, there is an excess of weight of air amounting in round numbers to one million of tons on each square mile. It has been maintained that it is reasonable to believe that the waters which lie under the high-pressure area have a tendency to escape from under the excessive weight toward the space over which the pressure is less.

It has been observed in the Mediterranean and Baltic that a rise of an inch in the barometer will be attended with a corresponding rise in the level of those seas of about thirteen inches, or a rise in the barometer will produce a rise of thirteen times the amount in the level of those seas.

This is certainly remarkable, and has been deemed sufficient to make many conclude that the difference of atmospheric pressure has some power both in originating and in directing the course of ocean-currents.

There are thus three causes adduced as controlling ocean-currents; the one advanced by Dr. Carpenter seems now to be in a fair way of general acceptance; though it is claimed, even by those who agree with him, that we must allow the others an important part, too, in the general circulation.—

*John Proffatt, in Appletons' Journal.*

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UNIFORMS FOR GIRLS.—A writer in *Scribner's Monthly* does not know "why it is not just as well for school-girls to dress in uniform as for boys. There are many excellent schools in England where the girls dress in uniform throughout the entire period spent in their education. By dressing in uniform the thoughts of the pupils are released from the consideration of dress; there is no show of wealth, and no confession of poverty. Girls from widely separated localities and classes come together, and stand or fall by scholarship, character, disposition and manners. The term of study could be lengthened by the use of the money that would thus be saved; and while a thousand considerations favor such a change, we are unable to think of one that makes against it." These reflections are suggested by the fact that in some of our schools the mere item of dress for young ladies is often over \$1000 a year.

## COMPULSORY EDUCATION.

WHILE there are 5,660,074 illiterates in the United States, there are but about 3,637,000 of adult illiterates; and the latter seems the fairer way of stating it, as many persons learn to write between the ages of six and twenty-one. Only 1,148,000 of these are in the North, and of these 756,000 are in the Pacific States, thus leaving 583,000 in those States where our school system has had its best opportunity for development. In the Northern States there are 690,000 foreign illiterates: if only half of these are in the States referred to, (and doubtless there are many more,) then the number of native adult illiterates dwindles down to 238,000, or less than one to each 100 of their population. Making a fair estimate of the number of these from the South, both colored and white, and there remains less than one illiterate to each 300 of those who have had the advantages of our free schools. Surely this is not a disgraceful record when compared with other countries, and especially with the results of the compulsory law in Prussia; for in this country, after an enactment compelling children to attend school between the ages of six and fourteen had been thoroughly tried for 128 years, there were found to be for each 100 inhabitants one young man between the ages of twenty and twenty-two who could not read and write. What would be the proportion were older persons and females included?

History proves most conclusively that the leading nations of Europe do not base their power on any compulsory system of education, as stated in your April issue, but on the superiority of their teachers and schools. Prussia affords a striking example of this, as she tried such a law for almost 100 years, and, meeting with so little success, determined to devise some plan which should prove more effectual, hence established a sufficient number of Normal schools to educate all who wished to teach, and from their organization dates that high culture which has astonished all Christendom. With these are connected preparatory departments, in which applicants are tried for six months,



at the end of which time only those who have shown considerable ability are allowed to enter the Normal department; here they must remain three years, and not only finish their course of study in an honorable manner, but also prove themselves successful teachers, or else they are not permitted to take charge of a school. Any teacher who fails to make sufficient advancement, either in skill or culture, is required to reënter the school for further instruction. Thus the Prussian instructors are only the *best* of the *best*, and no person is allowed to teach either a public or private school without the same rigid preparation. There are four cantons in Switzerland that have never had any compulsory law, and yet education in them is said to be as nearly universal as in any of the others; because, like them, they employ none but very superior teachers.

But it is stated by good authority that Holland has accomplished what no other country ever did, as she has not one adult citizen who cannot read and write. Yet she has never had any laws compelling school attendance, but her grand success is the result of having teachers and schools superior even to those of Germany, Prussia, and Switzerland.

M. EMBREE.

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*EMINENT FOREIGN TEACHERS DE-  
CEASED IN 1871.*

THE space at our command is only sufficient to permit us to give a list with dates of the eminent foreign teachers deceased in 1871.

January 12th, Very Rev. HENRY ALFORD, D.D., Dean of Canterbury, died. A graduate of Cambridge, he was Hulsean Lecturer at Cambridge in 1841-2, and Examiner of Logic and Moral Philosophy in the University of London from 1841 to 1857.

February 9th, HENRY MELVILLE, D.D., died in London, aged 72. He graduated from Cambridge with high honors, and from 1821 to 1830 was Fellow and Tutor of St. Peter's

College. From 1852 to 1859, he was principal of the East India College, Haileybury.

February 24th, JULIUS LUDWIG WEISBACH, Ph.D., 38 years professor of Applied Mathematics and Mining Surveying in the Academy of Freiberg, died there, aged 61 years. He was the ablest civil engineer of his time, and author of many valuable scientific works.

March 18th, AGUSTUS DE MORGAN, an eminent mathematician, professor, and author, died in London, aged 65. He graduated from Cambridge in 1827, was professor of Mathematics in the University of London from 1828 to 1831, and from 1836 to 1866. His vast attainments in Mathematics and Logic are well known, and he had written numerous works on these and other subjects.

March 19th, GEORGE GOTTFRIED GERVINUS, historian, philosopher, and professor, died at Heidelberg, aged 65 years. He was professor in 1828-30 at Frankfort-on-the-Main, in 1835-1837 at Gottingen, whence he was dismissed for liberal opinions. From 1844 till his death he was professor of History at Heidelberg—he took part in the revolution of 1848.

March 19th, WILHELM VON HAIDINGER, an Austrian geologist, mineralogist, and professor died at Vienna, aged 76. He had been professor of Mineralogy and director of the Montanistic Museum since 1843.

May 25th, Most Rev. GEORGES DARBOY, D.D., Archbishop of Paris, was murdered by the Commune, aged 58 years. He was from 1839 to 1844 professor of Philosophy and Dogmatic Theology in the seminary at Langres. From 1844 to 1854 he was first Almoner of the College of Henry IV., and inspector of the religious instruction of the colleges of the Archiepiscopal Diocese of Paris.

The same day, the Abbé GASPARD DUGUERRY, an eminent pulpit orator, was murdered by the same ruffians, at the age of 74 years. He had been from 1820 to 1824 professor of Philosophy, Eloquence, and Theology in the College of Villefranche; and from 1868 to the Summer of 1870 the religious instructor of the Prince Imperial.

June 7th, ERNST IMMANUEL BEKKER, an eminent German philologist and professor died in Berlin, aged 86 years. He was professor of Greek Literature in the University of Berlin from 1807 to 1810, and from 1820 to 1871.

June 13th, Rev. GIOVANNI PIETRO REVEL, D.D., a Waldensian clergyman and professor, died at Florence. He had been professor of Theology and head of the Waldensian Theological Seminary, now at Florence, since 1855.

July 30th, Rev. HENRY LONGUEVILLE MANSEL, D.D., Dean of St. Paul's, died in London, aged 50 years. He had been Reader in Moral and Metaphysical philosophy in Magdalen College in 1855-59, Waynflete professor of the same 1859-1867, and Regius professor of Ecclesiastical History, Oxford University, from 1867 to 1870.

July, Rev. WILLIAM HINCKS, an eminent naturalist, died at Toronto, Canada. He was the first professor of Natural History in Queen's College, Cork, and from 1853 till his death held a similar professorship in the University of Toronto.

Sept. 7th, Rev. GEORGE FERRIS WHIDBORNE MORTIMER, D.D., Canon of St. Paul's, and for many years Head Master of the City of London school, died in London, aged 66 years.

Sept. 16th, Rev. GEORGE ARCHDALL GRATWICKE, D.D., died in Cambridge, at the age of 84 years. He had been for thirty-six years Master of Immanuel College, Cambridge, and was eminent for his thorough scholarship.

Sept. 19th, Rev. RICHARD WILLIAM JELF, D.D., Principal of King's College, London, and Canon of Christ Church, Oxford, died in London, aged 73 years. He graduated from Christ Church, Oxford, in 1820, with first-class honors, was Fellow and tutor of Oriel College from 1820 to 1826, Preceptor to Prince George of Cumberland (afterward King of Hanover), 1826-1844, and Principal of King's College, 1844-1871. He was also an author of considerable note.

Sept. 28th, CIPRIANI POTTER, Principal of the Royal Academy of Music, died in London, aged 79 years. He

had been a pupil of Beethoven, and succeeded Dr. Crotch as Principal of the Royal Academy of Music in 1833.

October 18th, CHARLES BABBAGE, Mathematician and Philosophical Mechanist, Professor and author, died in London, aged 79. He was the inventor of the "Difference," or Calculating "Machine," and for 11 years (1828-1839,) Professor of Mathematics in the University of Cambridge. He was also a voluminous writer on Mathematical and other scientific topics.

October 23d, Rev. GUILLAUME DE FELICE, D.D., a French Clergyman, Author and Professor, died at Montauban, France, aged 68 years. He had been for 36 years Professor of Theology in the Protestant Theological Seminary at Montauban.

November 2d, Rev. J. GIBSON, D.D., died at Glasgow, of paralysis, aged 72 years. He had been for nearly 20 years Professor of Church History and Systematic Theology in the Free Church College at Glasgow.

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### *THE UNIVERSITY OF STRASBURG.*

THIS institution, the crowning work of the restoration of a lost part to the body politic, was inaugurated on the first of May amid great enthusiasm on the part of the German. Beginning its new career under the most favorable auspices, it promises to be one of the most prominent schools in the empire, and with its able and experienced corps of instructors, bids fair to rival in influence its well-known associates. Between forty and fifty of the most illustrious scholars of Germany have been secured for the resuscitated Alma Mater; and so carefully have the selections for the different "chairs" been made, that Berlin herself has reason to be jealous of her latest rival. But few of the professors connected with the former French faculties at Strasburg, have united themselves with the revived university, the greater number of the instructors having

been taken from other German universities. Able teachers, abundance of money, and a library which already numbers two hundred thousand volumes, combine to give the University of Strasburg a successful start on its new career. It must be remembered, however, that all these advantages have been derived from the power of the German empire ; the University has yet to win its way to popularity among the people of the province which it adorns. It was not to be expected that the Alsatians, who had learned to consider themselves a part of the French nation, and whose country has lately been called by Gambetta "the cradle of French patriotism," should extend a friendly hand to the institution, whose mission is "to complete the annexation of the conquered provinces by means of German culture."

We learn from the "*Republique Francaise*," that the invitations to the inauguration, which were sent to the authorities and clergy of Strasburg, were returned, with one or two exceptions, with remarks expressive of indignation and contempt. The people of Alsace have thus given evidence of their opposition to and hatred of the power that has arisen among them ; but it seems scarcely probable that they will be able long to resist its influence. That the Germans do not overrate the effect of the regenerated University can be clearly shown by a reference to its former history. "From the time of its foundation to that sad day when its property was confiscated by the French republic, the University of Strasburg had been in an unusually flourishing condition. The two most celebrated and reactionary Austrian statesmen, Cobentzl and Metternich, and the Bavarian minister, Montgelas, were Strasburg students during the last period of its existence as a university. Indeed, young men of rank from all nations flocked together at Strasburg immediately before the revolution. When it broke out, the contrast between German and French ways of thinking was so marked—Strasburg was still so German a city, and its university so strong a bulwark of German nationality—that the French officers deemed it incumbent upon themselves to arrest all the professors as 'aristocrats and fanatics.' These 'têtes carrées-Allemandes' were so tough, that the thoroughly French selectmen openly con-

fessed the fruitlessness of their endeavors to nationalize them. 'Whatever means have been used thus far to break the local spirit (*esprit de localité*) of these people, it has yet been impossible to abolish all the abuses to which these federalists and anti-revolutionists cling.' It was now one hundred and twelve years since Alsace had been united with France, and yet it had remained so German, that not even the guillotine and terrorism were sufficient to break the nationality of the province." How to destroy this spirit which prompted the people to look to Germany as the Fatherland, was a question which troubled the French authorities. It received a partially satisfactory answer when, in 1794, the Commissioners of the French Republic killed the university, the hydra of Germanism, with the avowed purpose of stifling the Germanic spirit; and it was only after the university had been broken up, that the French succeeded in a measure in making the Alsatians forget that they were Germans. With the restoration of the university, it is but reasonable to expect that its influence will be felt as of old, and a change in the feeling of the inhabitants of the recovered provinces follow its establishment. The work to be accomplished will require, however, considerable time. Although only a portion of the educated classes have been Gallicized, it will be no slight task to gain over the lower orders, thoroughly German though they are; while their religious instructors, under orders from the church at Rome, are setting themselves against the change. Whatever the effect of the university on the inhabitants of Alsace may be, civilized humanity will be the richer by one more important factor in the development of intellectual cultivation.

S. S. W.

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EDUCATION A DEBT.—Education is partly allopathic, partly homœopathic; often like causes like, and the doses to take effect must be infinitesimal. But if this were all, only the good could make virtue flourish around them, whereas now the sweetest flowers often cover the saddest ruins.

*NAMES OF THE STATES.*

**A** CORRESPONDENT having inquired why the States are called by their present names, and what are their derivation and meaning, an exchange answers as follows :

**MAINE.**—So called from the province of Maine, in France, in compliment to Queen Henrietta, of England, who, it has been said, owned that province. This is the commonly received opinion.

**NEW HAMPSHIRE.**—Named by John Mason, in 1639 (who, with another, obtained the grant from the crown), from Hampshire County, in England. The former name of the domain was Laconia.

**VERMONT.**—From the French “vert” “mont,” or green mountain, indicative of the mountainous nature of the State. The name was first officially recognized January 16, 1777.

**MASSACHUSETTS.**—Indian name signifying “the country about the great hills.”

**RHODE ISLAND.**—This name was adopted in 1644 from the Island of Rhodes, in the Mediterranean, because of its resemblance to that island.

**CONNECTICUT.**—This is the English orthography of the Indian word Quon-eh-ta-cut, signifies “the long river.”

**NEW YORK.**—Named by the Duke of York under color of the title given him by the English crown in 1664.

**NEW JERSEY.**—So called in honor of Sir George Carteret, who was Governor of the Island of Jersey, in the British Channel.

**PENNSYLVANIA.**—From William Penn, the founder of the colony, meaning “Penn’s Woods.”

**DELAWARE.**—In honor of Thomas West, Lord de-la-Ware, who visited the bay, and died there in 1610.

**MARYLAND.**—After Henrietta Maria, Queen of Charles I., of England.

**VIRGINIA.**—So called in honor of Queen Elizabeth, the “virgin queen,” in whose reign Sir Walter Raleigh made the first attempt to colonize that region.

NORTH AND SOUTH CAROLINA, were originally in one tract, called "Carlina," after Charles IX., of France, in 1504. Subsequently, in 1665, the name was altered to Carolina.

GEORGIA.—So called in honor of George II., of England, who established a colony in that reign in 1732.

FLORIDA.—Ponce de Leon, who discovered this portion of North America in 1512, named it Floriday, in commemoration of the day he landed there, which was the Pasques de Flores of the Spaniards, or "Feast of Flowers," otherwise known as Easter Sunday.

ALABAMA.—Formerly a portion of Mississippi Territory, admitted into the Union as a State in 1819. The name is of Indian origin, signifying "Here we rest."

MISSISSIPPI.—Formerly a portion of the province of Louisiana. So named in 1800, from the great river on the western line. The term is of Indian origin, meaning "long river."

LOUISIANA.—From Louis XIV., of France, who, for some time prior to 1763, owned the territory.

ARKANSAS.—From "Kansas," the Indian word for "smoky water," with the French prefix "arc," bow.

TENNESSEE.—Indian for "the river of the big bend," i. e., the Mississippi, which is its western boundary.

KENTUCKY.—Indian for "at the head of the river."

OHIO.—From the Indian, meaning "beautiful." Previously applied to the river which traverses a greater part of its borders.

MICHIGAN.—Previously applied to the lake, the Indian name for a fish-weir. So called from the fancied resemblance of the lake to a fish-trap.

INDIANA.—So called in 1802, from the American Indians.

ILLINOIS.—From the Indian "illini," men, and the French suffix "ois," together signifying "tribe of men."

WISCONSIN.—Indian term for a "wild-rushing channel."

MISSOURI.—Named in 1821 from the great branch of the Mississippi which flows through it. Indian term, meaning "muddy."



IOWA.—From the Indian, signifying the “drowsy ones.”

MINNESOTA.—Indian for “cloudy water.”

CALIFORNIA.—The name given by Cortes, the discoverer of that region. He probably obtained it from an old Spanish romance, in which an imaginary island of that name is described as abounding in gold.

OREGON.—According to some, from the Indian oregon, “river of the west.” Others consider it derived from the Spanish “oregano,” wild marjoram, which grows abundantly on the Pacific coast.

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### GEOGRAPHICAL NOTES.

UNITED STATES.—Objection has been brought against the name *Montana* as being a made-up word, and otherwise not fit to be bestowed on the Territory which it designates. It is, however, a true Spanish adjective form, meaning mountainous, and is very appropriately applied in this instance. Moreover, it actually occurs on a map of the New World accompanying a work published in Amsterdam in 1605, where it marks the present State of Maine. (See Raleigh and Keymis, *Voyage to Guiana*, 1598: No. 19 of the facsimiles numbered 1826 in Fred. Muller's “Catalogue of Books on America”—Amsterdam, 1872.) This proves *Montana* to be one of the oldest names on the Continent; and it would be well if equal justification could be found for the naming of Washington and Wyoming Territories.

—The late Prof. S. F. B. Morse left in his will \$1,000 to the American Geographical Society for the encouragement of Geographical research. There will certainly be no lack of home candidates for it: Clarence King, Prof. Hayden, Prof. Whitney, Major Powell, and their associates; Capt. Hall, Mr. Stanley, and now the corps of the Palestine Exploration Society—the rival of the English Palestine Exploration Fund—about to investigate thoroughly the country beyond Jordan. Persons, by the way, who are specially in-

terested in this last enterprise, can obtain full information from the general agent, Rev. James H. Dwight, 26 Exchange Place, Room 14, N. Y.

—Excellent stereoscopic views of Sitka, Fort Wrangell, and other places in Alaska, with portraits of Indians, illustrations of Indian life, and flying views from shipboard, have been taken by Mr. Muybridge, of San Francisco, and are procurable of him at \$3.00 (gold) per dozen. The same artist also has photographic views of the same subjects, 7x9, which cost \$1.25 each, in gold.

—Diamonds have been found in a gravel claim two miles east of Placerville, Eldorado County, California. That is to say, two stones have been picked up, at different times; the larger being worth from one to five hundred dollars, the smaller not more than thirty.

—The connection of New Orleans with Houston, Texas, by rail, should be completed by contract in April, 1873. The portion on which work is now actively going forward is from Berwick's Bay to Orange on the Sabine River, *via* New Iberia and Vermilionville, (La.) In 1887, when Port Lavaca will doubtless have a Union depot for the shipment of passengers and freight to the Pacific or the Atlantic, one can look back on what two centuries have accomplished since La Salle attempted his fatal journey from that place to the Mississippi; and it will be highly in order to erect a statue to this greatest of American explorers on the site of his Fort St. Louis, of unhappy memory. The International Railroad of Texas, of which 100 miles are now in operation N. E. from Hearne, will, when completed, connect Fulton, (Ark.) on the Red River, with Laredo (Texas) on the Rio Grande.

SOUTH AMERICA.—The *Hassler* expedition left Montevideo on the evening of the 28th February, and on March 16 reached Sandy Point, Straits of Magellan—a Chilean convict settlement, having over 1,000 inhabitants, and surrounded by mountains covered with thick woods (Punta Arenas of the school atlases). A stop was made on the way at Port St. Antonio, St. Mathias Bay, the best intermediate harbor,

though having a tidal rise and fall of 25 feet, and being entirely uninhabited. "It is," says Count Pourtales, "a most desolate country, like all Patagonia, without a tree or a drop of fresh water." Here, nevertheless, there were found many objects of interest, and the tracks of ostriches and guanacoës were observed. The Straits were entered on the 13th of March, and anchor cast in Possession Bay—a harbor fifteen miles in diameter, formed by a depression in the northern shore, Terra del Fuego being faintly visible to the south. An excursion was made to Mt. Aymond, ten miles distant to the N. W. by W., a height something under 1,000 feet, and which proved to be an extinct volcano, as also the four lower adjoining peaks called the "Asses' Ears." This is the first discovery of the kind outside of the Andes range. A guanaco was shot by this party. Prof. Agassiz visited a smaller and nearer height, finding convincing proofs of glacial action from the south northward in the scratched and polished pebbles and terminal moraines. He also came upon a salt water lake at an elevation of 200 feet. On Magdalena and Elizabeth Islands additional evidence of glaciers was obtained. The former is the haunt of vast numbers of gulls, cormorants, and penguins, which furnished specimens in abundance. Sea-lions, too, abound in the Straits and are easily caught.

EUROPE.—M. Philarète Chasles writes to the *Athenæum* of May 4 :

"What said M. Gambetta the other day? 'Frenchmen,' says he, 'do not travel enough. What we are most ignorant of is the geography of our own country.' True; and they abhor not only traveling, but reading books of travel. Unfortunately for himself, the ex-Dictator furnished an excellent proof of that ignorance. In the same allocution to the citizens of Angers he uttered this flattering phrase:—'Your attitude this day sufficiently shows that the inhabitants of the Département du Maine have been shamefully slandered.' Angers belongs to the Province of Anjou, as most school-boys know; and the eloquent lawyer who commits such a blunder has a good deal to learn before he attempts to teach others. A mistake like this is only laughable in an after-dinner speech; but the complete ignorance of one's country and its geography assumes a more dangerous character when, in a military despatch, one mistakes Epinay-sur-Orge for Epinay-lez-Saint-Denis."

—Similar mistakes, it appears, the French have not been exempt from for a long period. The *Nation* of May 9 prints the following passage from the “*Mémoire statistique du département de Rhin et Moselle*” of Prefect Boucquéau, a Belgian appointed to that department by the first Napoleon when consul, in the year XII. of the Republic. M. Boucquéau had this story to communicate :

“In 1688, Marshal Boufflers besieged and bombarded the city of Coblentz without being able to take it, but Little Coblentz (Lützel-Coblentz), situated on the left bank of the Moselle, was totally destroyed. Although it has never been rebuilt since, it continues to figure in large letters on the geographical maps, and when, in 1794, the French seized Coblentz, they made a special requisition on the Little Coblentz which they had destroyed a century previous. This mania of our modern maps, which are always copied after older ones, for designating as important places localities which are only ruins, has often been the cause of like mistakes: sometimes a quartermaster, map in hand, has assigned lodgings to a battalion which, after having marched a league, found nothing but ruins, or an old tower in the city or chateau allotted to it for its winter quarters.”

—Russia is to take a national census in late autumn of this year, and the news, as is not uncommon, disturbs the minds of the common people, who think only of taxes and conscription. Here are some figures from the late German censuses taken Dec. 1, 1871, which teachers would do well to note in the margins of their geographies: Total population of Prussia, 24,642,386 (of which 12,051,232 are males, and 12,490,776 are females), against 23,971,337 in 1867, or an average rate of increase equal to 2.8 per cent. The province of Brandenburg, however, which has 2,863,509 inhabitants, increased 5.39 per cent., and Westphalia 3.96 per cent.: the Rhine province, 3.57, Silesia 3.39, and so down to Pomerania, 0.98. The full results of this census will not appear before December. Baden shows 1,461,428 inhabitants (of which 712,769 are males, and 718,665 are females), an increase of only 1.84 per cent. since 1867, and this chiefly in the large towns. While the towns above 5,000 inhabitants (16 in all) have added 25,400 to their number, 97 towns of smaller size have lost 2,646: and the whole gain in the rural districts only amounts to 1,058. Emigration took away 17,143 persons. Mannheim, the most populous city, has 39,614 inhabitants; Carlsruhe, 36,622.

The total population of Bavaria is 4,850,038, an increase of only 25,617 since 1867 in spite of the freedom accorded in the interval both to industry and to marriages. It is said in explanation, however, that absentees were reckoned in the census of 1867, and that the 20,000 men now on garrison duty in Alsace-Lorraine should be added to the figures of last year. Nevertheless, emigration and exceptional mortality among infants have done much to check the growth of population in Bavaria.

AFRICA.—News was received in London on May 1 from Bombay, and on May 3 from Aden, that the *Herald's* explorer, Mr. Stanley, had joined Livingstone at Ujiji. On the 19th the *Herald* spun out a meagre dispatch, in whose contents it is impossible to place implicit confidence, though it may be entirely veracious. Mr. Stanley's last account of himself left him at Ogara, a twenty days' journey from Unyanyembe, the half way station between Ujiji and Zanzibar. This was about Sept. 20, 1871. The new information would indicate that he was occupied till Nov. 20 in traversing the twenty days' course from Ogara to Ujiji; that he found Livingstone temporarily absent on an exploring expedition, having "established his camp at Myemba, which is twenty days' march from Ujiji, and about midway between the lakes of Tanganyika and Victoria Nyanza;" but that prior to the 12th of January, 1872, Livingstone had returned and welcomed Stanley, "and the two white men had taken up their residence together." The authority for these statements is one "Seyd ben Majid, one of the wealthiest and most powerful Arab chieftains at Ujiji," who left that town Jan. 12 and reached Unyanyembe Feb. 5. That is to say, he accomplished in 23 days what Stanley had been nearly three months in doing (Aug. 30—Nov. 20). Stanley's delay he accounted for by saying that he "had been compelled to get to Ujiji by a very circuitous route, as the regular caravan route had been rendered impassable on account of a native war among the local chieftains." But Majid's rapidity of movement is hardly explained by a subsequent statement that his object in leaving Ujiji was to open the blocked route; that his enemy, a chief named Misambo, had taken

up a position midway intending to give him battle, and had fallen back before him as he advanced. Expecting a conflict, Majid was led on to Unyanyembe without intending it; which he gives as the reason why he brought no letters from Stanley and Livingstone. All this was told at Unyanyembe to Sheikh ben Nasib, who, Feb. 8, sent off "his trusty slave" Sa'eed to his brother Abdallah ben Nasib, a merchant in Zanzibar, "with these welcome and authentic tidings." The messenger arrived in Zanzibar April 2—that is to say, doing in two months what Stanley (more encumbered, of course,) was three months in doing. This is the whole story, and, circumstantial as it is, it is certainly not above suspicion. If communication between Ujiji and the coast is so regular and easy, it is almost incredible that in three years Livingstone did not contrive to send a single letter to Zanzibar. Lieut. Dawson's "Search and Relief Expedition" has not turned back on account of the news, which met it at Zanzibar, and which the steamer *Abydos* that brought the party out carried to Bombay.

—Who Mr. Stanley is, is a question which our readers may very well ask, and fortunately we are able to give them some particulars of his career. His full name, as we mentioned in our April notes, is Herbert M. When a mere boy, having an insatiable longing for adventure, he ran away from home and "fought his way all over Europe," walking where he had not the means to ride, and often sleeping in the open fields. While thus engaged he was brought before a French court "for traveling in exciting times without a passport, and defended himself and secured his own release." Before he returned to America, he had acquired a knowledge of the modern languages and to some extent of the ancient. The employment into which he naturally fell on arriving at home was that of a journalistic bohemian. As a clerk in the Fort Fisher expedition under Gen. Terry, he sent a glowing account of the engagement to a New York paper. He next went to Turkey, but in an excursion through the country fell among brigands, and was maltreated and robbed of between \$4,000 and \$5,000 gold, which he vainly endeavored to recover through the American consul at Constantinople. His return to this country took him

through a portion of France and Spain on foot and destitute. Stopping a few days in New York, he commenced a lecturing tour, with Turkey for his subject, and reached St. Louis in the winter of 1866. Meeting with no success in this enterprise, he joined Gen. Hancock's expedition into the Indian country as correspondent of a St. Louis journal, and had occasion to describe the burning of the Cheyenne and Kiowa village on Pawnee Fork; next joined the Peace Commissioners, and was at the famous councils held at North Platte, Fort Laramie, and Medicine Lodge Creek. It was subsequent to this that he became definitively attached to the corps of the *N. Y. Herald*. His first great mission was assigned him very unexpectedly (he sailed in a few hours after it was broached to him), and consisted in accompanying the British expedition for the relief of the Abyssinian captives. He overtook it in Egypt, went with it to Magdala, and "sent his couriers across country ahead of Gen. Napier's," so that the *Herald* published the first news of the British success, and had the satisfaction of lending it to the *London Times*. After this, he went to Spain, where a correspondent of the *Boston Journal* met him in October 1869, and together they went to Valencia, and witnessed the "nine days' fight." As he stood on the balcony of the house in which they were besieged, a bullet took a wisp of hair from his head before he would retire, when, coolly closing the shutters, he resumed his reading of Carlyle's "Frederic the Great." His next professional service was reporting the opening of the Suez Canal; in May of 1870 he was traveling in the interior of Persia, having previously "done" the Holy Land. He could scarcely have recovered from the fatigue of his Eastern travel, when summoned by the *Herald's* telegram to "find Livingstone." In person, Mr. Stanley is described as a "short, smart, active young man of sturdy build, indefatigable limbs, and unbending will," whose "intense, sparkling face has been fanned by almost every breeze in almost every climate." He is undemonstrative, unboastful, and self-possessed; has all the audacity and brilliancy of the bohemian, his "vigorous imagination," small scrupulousness about facts, and want of mental and literary discipline.

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*Periodical Literature.*—*Overland Monthly* for June: "Pavy's Expedition to the North Pole." [See, under head of United States, the notice of Pavy in the MONTHLY for April.] *Ladies' Repository* for June: "Corinth; the City of Idolatry," by Prof. J. S. Lee; "Recol-



lections of Buenos Ayres," by Mrs. C. L. Weeks. *Littell's Living Age*, May 11: "India in Jamaica," (from the *London Economist*.) [This is a remarkable article on Sir J. P. Grant's administration of Jamaica since the revolt suppressed under Gov. Eyre. It shows how much the personal character of a ruler affects the questions whether slavery or freedom is the best condition of society in the tropics as elsewhere; whether the freed blacks will work; and whether the superior race can live in harmony with the race that has lately been in subjection to it.]

—Captain Burton will sail on or about the 17th of May to Iceland, upon which country, its language and history, he is about to produce an important work. He will be accompanied by the Earl of Dunraven, who is also well known in literature.—*London Publishers' Circular*, May 16.

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### THE PHILOSOPHER AND HIS DAUGHTER.

[THE following charming poem, which has the merit of combining "instruction and amusement," and of showing the estimation which usually attends learning, was written by Shirley Brooks, and first appeared in the *Illustrated London News*.]

- A SOUND came booming through the air!  
 "What is that sound?" quoth I.  
 My blue-eyed pet, with golden hair,  
 Made answer, presently,  
 "Papa, you know it very well;  
 That sound—it was Saint Pancras bell."
- "My own Louise, put down the cat,  
 And come and stand by me;  
 I'm sad to hear you talk like that,—  
 Where's your philosophy?  
 That sound—attend to what I tell—  
 That sound was not Saint Pancras bell."
- "Sound is the name the sage selects  
 For the concluding term  
 Of a long series of effects,  
 Of which that blow's the germ.  
 The following brief analysis  
 Shows the interpolations, Miss."
- "The blow which, when the clapper slips,  
 Falls on your friend, the bell,  
 Changes its circle to ellipse  
 (A word you'd better spell),

And then comes elasticity,  
Restoring what it used to be.

"Nay, making it a little more,  
The circle shifts about,  
As much as it shrunk in before,  
The bell, you see, swells out ;  
And so a new ellipse is made,  
(You're not attending, I'm afraid.)

"This change of form disturbs the air,  
Which in its turn behaves  
In like elastic fashion there,  
Creating waves on waves ;  
Which press each other onward, dear,  
Until the outmost finds your ear.

"Within that ear the surgeons find  
A tympanum, or drum,  
Which has a little bone behind—  
*Malleus*, it's called by some ;  
Those not proud of Latin grammar,  
Humbly translate it as the hammer.

"The wave's vibrations this transmits  
To this the incus bone,  
(Incus means anvil, which it hits,)  
And this transfers the tone  
To the small *os orbiculare*,  
The tiniest bone that people carry.

"The *stapes* next—the name recalls  
A stirrup's form, my daughter—  
Joins three half circular canals,  
Each filled with limpid water ;  
Their curious lining you'll observe,  
Made of the auditory nerve.

"This vibrates next—and then we find  
The mystic work is crowned ;  
For then my daughter's gentle mind  
First recognizes sound.  
See what a host of causes swell  
To make up what you call the 'bell.'"  
Awhile she paused, my bright Louise,  
And pondered on the case ;  
Then, settling that he meant to tease,  
She slapped her father's face.  
"You bad old man, to sit and tell  
Such gibberygosh about a bell !"

*INFLUENCE OF CLIMATE UPON MAN.*

**A**T a recent meeting of the New York Liberal Club, some interesting remarks were made on this subject. Man, in his delusion, said a speaker, generally opposes his dependency upon nature. Being himself her child, he thinks that no impression is strong enough to leave a durable effect upon him. But experience teaches the very opposite. It shows that man, to a certain extent, was always subject to the climate. It is not generally known, but it is nevertheless true, that a pure, moderately dry air generally produces great mental sprightliness, especially with full-blooded persons. A cloudy and moist atmosphere, on the other hand, produces mental relaxation, and, with many, melancholy. This explains why suicides so often happen when the sky is overcast. The depressed mental state is thus further enhanced. Villeneuve reports that of every ten suicides which were committed in Paris during two years, nine took place in the rainy season. The influence of the climate is also well exemplified in the case of mountaineers. They are quicker, more active, and excitable.

From the unequal action upon the body, and its reaction upon the mind, the character of various nations may be explained.

The influence of a moist atmosphere is strikingly illustrated in the case of individuals who have been weakened by previous illness, from the great number of suicides committed at the close of the year 1828, in the Dutch places Gröningen and Sneek. Most of the unfortunates had suffered from the epidemics of 1826 and 1827. In the city of Sneek, with 6,000 inhabitants, not less than four suicides took place in one week, among those was a boy of eight years.

The Swiss naturalist, Desor, in a recent essay, describes the climate of North America as very changeable and dry. After having explained a number of phenomena produced by the climate in general, he depicts its influence upon the inhabitants of this country. He derives from the climate his activity, acuteness, his tall stature, his eagerness for gain, his practical talent, and his love of adventure.

It is also well known that the inhabitants under a preponderating clear sky possess more talent for art, while those under a gloomy sky have more propensity for speculation and thought.

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### *WHY TIMBER IS PAINTED.*

WHEN water is applied to the smooth surface of timber, a thin layer of the wood will be raised above its natural position by the expansion or swelling of the particles near the surface. In colloquial phrase, working men say that when water is applied to a smooth board, the grain of the timber will be raised. Every successive wetting will raise the grain more and more; and the water will dissolve and wash away the soluble portions with which it comes in contact. As the surface dries, the grain of the timber at the surface, having been reduced in bulk, must necessarily shrink to such an extent as to produce cracks. Now, if a piece of oil-cloth be pasted over the surface, the timber will be kept quite dry. Consequently the grain of the wood will not be subjected to the alternate influences of wet and heat. As it is not practicable to apply oil-cloth already made, a liquid or semi-liquid material is employed for covering the surface, which will adhere firmly, and serve the purpose of oil-cloth in excluding water that would otherwise enter, to the injury of the work. Metallic substances are painted to prevent oxidation or rusting of the surfaces which may be exposed to moisture.

It is of primary importance to make use of such materials as will form over the surface a smooth and tenacious pellicle, impervious to water. Any material that will not exclude water sufficiently to prevent the expansion of the grain of the timber, or the oxidation of metallic substances, must be comparatively worthless for paint. Linseed-oil possesses the property of drying when spread on a surface, and forming a tenacious covering, impervious to water. Spirits of turpentine, benzine, benzole, and certain kinds of lubricating oil, all of which are frequently used in preparing

paint, will not form a covering sufficiently tough and hard to resist the action of the water ; for which reason, the paint that is made by employing these volatile materials will be found comparatively worthless for outside work. A pigment is mingled with the oil to prevent the timber to which the paint is applied from absorbing the oil. The design is not to saturate the wood with oil, but simply to cover the surface with a coating resembling a thin oil-cloth.

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## EDUCATIONAL INTELLIGENCE.

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### THE SUMMER EDUCATIONAL MEETINGS.

THE NATIONAL EDUCATIONAL ASSOCIATION will hold its next annual meeting in the City of Boston, Mass., on the 6th, 7th, and 8th days of August, 1872. The forenoon and evening of each day will be occupied by the General Association, and the afternoon of each day by the four Departments. The exercises will be held in the Lowell Institute Hall and in the Hall of the Institute of Technology.

#### GENERAL ASSOCIATION.

1. Methods of Moral Instruction in Public Schools, by Dr. A. D. Mayo, Cincinnati, O.

2. The Co-Education of the Sexes in Higher Institutions. [President White, of Cornell University, will present this topic, if other duties permit him to attend the meeting.]

3. Compulsory School Attendance, by Newton Bateman, State Supt. Pub. Instruction, Ill. Discussion to be opened by J. P. Wickersham, State Supt. Com. Schools, Pa.

4. The Examining and Certificating of Teachers, by John Swett, Ass't Supt. Schools, San Francisco, Cal.

5. System of Normal Training Schools best Adapted to the Wants of Our People—Report by Wm. F. Phelps, Minn., Ch'n of Com.

6. The Educational Lessons of Statistics, by Hon. John Eaton, Jr., National Commissioner of Education.

7. Drawing in the Public School, by Walter Smith, State Director of Art Education, Mass.

8. Comparison in Education, by John D. Philbrick, Supt. Public Schools, Boston.

ELEMENTARY DEPARTMENT.—*Miss D. A. Lathrop, Cincinnati, O., Pres.*

1. Objective Teaching—Its Scope and Limit, by N. A. Calkins, Ass't Supt. Schools, New York City.
2. English Grammar in Elementary Schools, by M. A. Newell, Principal of State Normal School, Baltimore, Md.
3. Instruction in Natural Science in Elementary Schools.
4. Adaptation of Froebel's Educational Ideas to American Institutions, by W. N. Hailman, Louisville, Ky.

NORMAL DEPARTMENT.—*C. C. Rounds, Farmington, Me., President.*

1. The Proper Work of the Normal School, by J. C. Greenough, Principal State Normal School, Rhode Island.
2. Professional Training in Normal Schools, by T. W. Harvey, State School Commissioner, Ohio.
3. The Normal Institute, by A. D. Williams, Principal State Normal School, Nebraska.
4. Normal Work among the Freedmen, by S. C. Armstrong, Hampton, Va.
5. Model Schools—Their Uses and their Relation to Normal Training.

DEPARTMENT OF SUPERINTENDENCE.—*John Hancock, Cincinnati, O., President.*

1. The Extent, Methods, and Value of Supervision in a System of Schools, by H. F. Harrington, Supt. Schools, New Bedford, Mass. Discussion to be opened by J. L. Pickard, Supt. Schools, Chicago, Ill.
2. The Early Withdrawal of Pupils from School—Its Causes and Remedies, by W. T. Harris, Supt. Schools, St. Louis. Discussion to be opened by A. P. Stone, Principal of High School, Portland, Me.
3. Basis of Percentages of School Attendance—Report of Committee.

DEPARTMENT OF HIGHER INSTRUCTION.—*D. A. Wallace, Monmouth College, Ill., President.*

1. College Degrees—Report of Committee, Pres. D. A. Wallace, Chairman.
2. Greek and Latin Pronunciation—Report of Committee, Prof. H. M. Tyler, of Knox College, Ill., Chairman.
3. The Method of Teaching Physics by Laboratory Practice and Objectively, by Prof. Ed. C. Pickering, of Boston.
4. Modern Languages—Their Place in the College, College Preparatory, and Scientific Preparatory Courses, by Pres. J. B. Angell, of Michigan University.
5. How to Teach English in the High School, by Prof. F. A. March, of Lafayette College, Pa.
6. General Education as a Basis of Professional Training, by Prof. John S. Hart, of Princeton College, N. J.

The daily programme will be so arranged as to afford time for the thorough discussion of the topics of the greatest interest and importance, and each discussion will be opened by a person selected for the purpose. All who may be willing to participate in these discussions, are requested to come prepared to express well matured opinions in the fewest possible words.

Considerable difficulty has been experienced in making satisfactory railroad arrangements, but it is expected that at least two of the through lines from the West will agree to sell round-trip tickets at reduced rates. The local committee reports that nine good hotels agree to entertain guests at reduced rates—varying from \$1.50 to \$3.50 a day.

NEW YORK STATE TEACHERS' ASSOCIATION, twenty-seventh annual meeting, will be held at Saratoga Springs, July 23d, 24th, 25th.

On the first day of the meeting, after the organization has been effected, a report will be read on "the Condition of Education," and in the evening two papers will be read, one on "Scholarship Estimated in Figures," by Geo. H. Stone, and another, a "History of the Philosophy of Pedagogic," by Charles W. Bennett, of the Syracuse University.

On Wednesday, a report will be read in the morning on "Educational Statistics," and afterward papers entitled as follows: "Reading," "Music in our Schools," "Preparation for Business," and "High Schools." In the afternoon, a plan for reviving the *Teachers' Journal* will be discussed, followed by the following papers: "The Relation of Modern Philosophical Thought to Popular Education," "The Public School—What it has Done, What it is Doing, What it may Do," "Physical against Mental Training," and "Principles of Education as advocated by Herbert Spencer." In the evening, a paper will be read entitled "Teachers' Qualifications," and an address will be made by B. G. Northrop, of Connecticut, on the "Schools of Europe—What we May and Ought to Learn from Them."

On Thursday morning, a report will be made on "Improved Methods in Education," followed by papers entitled "Aiming at What?" "A Plea for Phonography," and "Pre-

servative Effects of Education." In the afternoon, Edward Smith, of Syracuse, will read a paper on the "True Principles and Practice of School Discipline," and an address will be made by J. B. Dickinson, of Massachusetts, concerning the "Relation of Elementary to Scientific Knowledge." Various reports will then be made, and in the evening select readings and recitations will be given by Messrs. W. M. Jelliffe and W. L. Richardson, of Brooklyn; W. C. Lyman, of New York, and O. H. Fethers, of St. Louis,—to be followed by a social reunion.

In order that there shall be no lack of subject matter for profitable investigation, the following questions are submitted to be discussed as the pleasure and wisdom of the Association shall determine:

I. What should be the proper work of Teachers' Institutes? Or more definitely: 1. What should not be done? 2. What should be done?

II. What should be the definite object of questioning pupils in recitation? Specially: 1. As it regards the teacher. 2. As it relates to the pupil. 3. As it concerns the subject-matter under consideration. 4. What are the Principles which should be followed in the Art of Questioning?

III. What should be accepted as thoroughness in teaching? 1. The amount of subject-matter passed over by the pupil. 2. The degree of the pupil's familiarity with the subject-matter. 3. The facility of expression shown by the pupils when reciting. 4. The frequency of reviews.

IV. What should be the special purpose of examinations? Relating to: 1. Their frequency. 2. The manner of conducting them—oral or written. 3. The nature of the questions—simple or exhaustive.

Arrangements have been made with a large number of railroad and steamboat companies to carry members of the Association at half-fare rates.

THE GERMAN AMERICAN TEACHERS' CONVENTION is to be held this year in Hoboken, N. J. The precise date is not yet made known—it is expected to be early in August. It is to continue in session for three days. The discussions will be in German except on the afternoon of the third day.

THE PENNSYLVANIA STATE TEACHERS' ASSOCIATION will



meet on the 21st, 22d and 23d of August, at the Academy of Music, in Philadelphia. Edw. Shippen, the Chairman of the Committee of Invitation, extends a cordial invitation to all.

The fourth annual meeting of the AMERICAN PHILOLOGICAL ASSOCIATION will be held in Providence, R. I., commencing on Tuesday, July 23d, at three o'clock, P. M. The annual address will be delivered by the president of the Association, Prof. W. W. Goodwin, of Harvard University, on Tuesday evening, July 23d.

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#### CURRENT PUBLICATIONS.

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**D**R. COLLIER'S GREAT EVENTS OF HISTORY, famous in England, has been prepared for American Schools, by an experienced and well qualified American Teacher.

The book, in its American form, gives (1) a connected outline of the history of the world from the creation of man, down to the present time. (2) It describes the most important events, in the order in which they occurred, not in a bare statement, but in sufficient detail to make a pleasant, connected and interesting story. (3) To enliven the book, the dwellings, furniture, domestic customs, and mode of life, are noticed to give an idea of the progress of civilization. (4) The objections to the histories prepared for the student are that they are either too prolix or consist of bare statement, so told as to lack interest as a reading book. This book is a happy medium, avoiding unimportant detail, as well as dry enunciation of facts. (5) The book is divided into chapters, preceded by a list of the principal heads, and the chapters are separated into short sections for the convenience of the student.

"The Great Events" is eminently calculated not only to give a clear, connected outline of history, but to create in the student a taste for historic knowledge.

MESSRS. WILSON, HINKLE & Co. have published "A

School History of the United States," by W. H. Venable. This work faithfully sketches the history of our Nation as a whole, not the history of sections, States, special interests, or particular men. Its style is good, its matter does not include the nonsense and absurdities too often found in our School Histories, and its mechanical execution is no less excellent—the portraits, pictures, maps, and typography being very superior.

MESSRS. COWPERTHWAIT & CO. are making good progress with "Monroe's Series of Readers." The Sixth Reader is just out, the Fourth is nearly finished, and the three lower books will follow in the Autumn. The Fifth we announced some time ago, promising a review of the Series, when completed.

MESSRS. HARPER & BROTHERS have issued the "Annual Record of Science and Industry for 1871." It is edited by Spencer F. Baird, of the Smithsonian Institution. The work furnishes a brief, yet sufficiently full, mention of the more important discoveries in the various departments of Science during the year 1871, selecting only such as are likely to excite general interest, or to be of lasting importance. No American has better opportunities than Mr. Baird for compiling a reliable and useful work of this kind. The same house has published "A Smaller Ancient History of the East." It is from the earliest times to the Conquest by Alexander the Great, including Egypt, Assyria, Babylonia, Media, Persia, Asia Minor, and Phœnicia. By Philip Smith. It is illustrated by many wood engravings. Also, "Shakespeare's Julius Cæsar, edited by William J. Rolfe."—"The Desert of the Exodus: Journeys on foot in the Wilderness of the forty years' Wanderings," undertaken in connection with the ordnance survey of Sinai and the Palestine exploration fund, by E. H. Palmer. It gives many maps and illustrations from drawings and photographs taken on the spot.—Another of Miss Mulock's works, entitled "A Brave Lady," with illustrations.

MR. L. W. SCHMIDT has just published "A Pocket Dictionary of Technical Terms used in Arts and Manufactures."

It is abridged from the Technological Dictionary of Rumpf, Mothes and Unverzagt, with the addition of Commercial terms. It is in the English, German and French languages. It is in three parts, in popular form—paper covers—and is sold at the moderate price of \$3.25.

To the technical man, to the manufacturer, to the merchant, and to the student, the work will become indispensable. The names of the editor and contributors guarantee its fidelity and accuracy.

WE may surprise some readers now ; but five years hence our words will, we trust, be confirmed, when we say that in America the new journal of the year for which and from which we have most hope, is not one destined for what please to call themselves the literary classes. In truth, there are no special literary classes in America. "The Southern Workman," just now established at Hampton, Va., expects to be read, not by the cloyed and satiated white man, who does not know what to do with his newspapers and magazines ; but by the black men and women and children, to whom reading is still a luxury, and who know as little of literature as Cadmus knew. The editor is Gen. Armstrong. He was born in the midst of a race who had just been called from barbarism, by such distinguished leaders as his father, one of the earlier missionaries in the Sandwich Islands. In the command of negro troops, who never failed to follow where he never failed to lead, Gen. Armstrong showed that he had learned to deal with the colored race in a fit school. Since the war, at the head of the Hampton Institute, he has been training their picked men and women to be teachers. And now, as a part of his enterprise, he undertakes the monthly journal, which, with picture, song, story, and lesson is to address specifically the men and women on whom the prosperity of half America for the next generation depends. Not one-half of the year's enterprises in journalism can challenge comparison for importance with one which has a purpose so profound as this.—*Old and New.*

A LATE number of the *Messenger de Paris* contains a very remarkable self-criticism on the decay of French nationality.

"Under the restoration," it says, "we had a Chalaubriand, a Roger-Collard, Foy, Benjamin Constant among the Opposition, names which gave to their era a lustre and a dignity, which we in vain look for in the following periods. Under Louis Philippe the Opposition had at least a Thiers, Odilon-Barrot, Ledru-Rollin, and Berryer. But the revolution of 1848 produced only Blanquis, Barbès, Felix Pyats—what a deep, immense fall! The 4th of September, 1870, gave us only a Gambetta, the representative of political Bohemianism! It is undeniable that from 1815 to 1870, our statesmen have succeeded each other in a descending scale, and heaven knows where we shall stop on this fatal inclined plane. Generations of statesmen are replaced by generations of adventurers. The year 1830 gave us diminutives of 1815; 1848, diminutives of 1830; 1870, diminutives of 1848. We are appalled to think of the monstrous dwarfs which new revolutions will beget. If we do not close the era of revolutions, we shall be made a people in which nobody governs, and nobody obeys; in which only incapacity rules above, and unbridled license below."

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### MISCELLANEA.

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HON. JOHN EATON, U. S. Commissioner of Education at Washington, D. C., has just had the degree of "Doctor of Philosophy," conferred upon him by Rutger's College, New Brunswick, N. J.

OXFORD UNIVERSITY celebrates this year the 1000th anniversary—probably fabulous—founded by King Alfred.

SIR CHARLES LYELL is seventy-five years old. He graduated at Oxford, and commenced studying law, which he soon forsook for geology.

MR. GOLDWIN SMITH believes the whole human race is destined to embrace vegetarianism. In this he walks by faith—with hardly a glimpse of light.

WOMEN are now admitted to fifty American colleges.

*BIBLE READING IN PUBLIC SCHOOLS.*

IMPORTANT DECISION OF THE SUPERINTENDENT OF PUBLIC INSTRUCTION.

- No. 1985. State of New York, Department of Public Instruction.
1. On the appeal of Thomas McMahon and others, Board of Trustees of the First Ward of Long Island City, Queens County, against John Fahnstock and others, Board of Education of Long Island City.
  2. Owen McEleamey and others against The same.
  3. Edward McBennett against The same. Before the Superintendent.

**T**HESE THREE APPEALS are all against the same respondents, and, as they involve but one and the same question, they may conveniently and properly be considered and disposed of together. The respondents compose the Board of Education of Long Island City, a body created under the provisions of Chapter 461, Laws of 1871, for the general local supervision and control of the Public Schools of Long Island City. The ground of appeal, in all these cases, is the action of the respondents under a provision in a By-Law adopted by them for the conduct of the Schools under their charge. That provision is in the following words: "The daily opening exercises shall consist of the reading of a portion of the Holy Scriptures, without note or comment."

The appellants, in the first of the above entitled cases, who are the Trustees of the First Ward of Long Island City, complain of the enforcement, under the direction of the respondents, of the provision of the By-Law above cited, by compelling the pupils in the School of the First Ward to be present at the reading of the Bible therein, under penalty of expulsion from the school in case of their non-attendance at such reading. The appellants allege that the regulation was directed to be so enforced, against their protest, and that of many of the scholars and of the parents or guardians of those scholars.

The appellants, in the second appeal, complain of the

threatened expulsion, in some instances, of their children from the First Ward School, because the appellants forbade their attendance upon the religious exercise in question, and in other instances they show that their children were actually expelled from that school, for refusing, in obedience to the direction of their parents, to attend school when the Bible was read.

The third appeal is by a resident of the Second Ward, or Long Island City, who alleges that his child was expelled from the school of that ward, for refusing, under direction of the appellant, to attend at the reading of the Bible therein. In this case an attempt has been made to show that the pupil left the school voluntarily, but it is manifest, from the evidence, that the enforcement of the regulation in question caused his withdrawal, and that he was refused permission to remain in the school except upon the condition of compliance with the requirements of the rule by attending when the Bible was read.

The question presented by these cases is not a new one in the history of the Public Schools of this State. The claim, by Trustees, of the right to enforce the attendance of pupils in the Public Schools, upon religious exercises therein, has been frequently passed upon in this department, by my predecessors in office, and by myself, and it has uniformly been held that no such right legally existed.

The following observations in a former decision rendered by me, are equally applicable here: "The object of the common school system of this State is to afford means of secular instruction to all children over five and under twenty-one years of age resident therein. For their religious training the State does not provide, and with it does not interfere. The advantages of the schools are to be free to them all alike. No distinction is to be made between Christians, whether Protestants or Romanists, and the consciences of none can be legally violated. There is no authority in the law to use, as a matter of right, any portion of the regular school hours in conducting any religious exercise, at which the attendance of the scholars is made compulsory. On the other hand, there is nothing to prevent the reading of the Scriptures or the performance of

other religious exercises by the teacher, in the presence of such of the scholars as may attend voluntarily, or by the direction of their parents or guardians, if it be done before the hour fixed for the opening of the school, or after the dismissal of the school. These principles were set forth by Secretary Spencer, more than thirty years since. In a decision made by that able officer in the year 1839, in which he sustained the action of the trustees of a school district in permitting a teacher to have prayers in the school, on condition that they should be had previous to school hours, the following remarks occur: 'Both parties have rights; the one to bring up their children in the practice of publicly thanking their Creator for His protection, and invoking His blessing; the other, of declining, in behalf of their children, the religious services of any person in whose creed they may not concur, or for other reasons satisfactory to themselves. These rights are reciprocal, and should be protected equally, and neither should interfere with the other. Those who desire that their children should engage in public prayer, have no right to compel other children to unite in the exercise against the wishes of their parents.'

"Neither the common school system, nor any other social system, can be maintained, unless the conscientious views of all are equally respected. The simple rule, so to exercise your own rights as not to infringe on those of others, will preserve equal justice among all, promote harmony, and insure success to our schools." (Code of Public Instruction, p. 355.) The same view of this subject was expressed by my immediate predecessor, the late Hon. V. M. Rice, who, in a decision rendered by him, February 5th, 1866, said: "A teacher has no right to consume any portion of the regular school hours in conducting religious exercises, especially where objection is raised. The principle is this: Common schools are supported and established for the purpose of imparting instruction in the common English branches; religious instruction forms no part of the course. The proper places, in which to receive such instruction, are churches and Sunday-schools, of which there is usually a sufficient number in every district. The money to support schools comes from the people at large, irrespective of sect

or denomination. Consequently, instruction of a sectarian or religious denominational character must be avoided, and teachers must confine themselves, during school hours, to their legitimate and proper duties." (Code of Public Instruction, p. 349.)

The action of the Board of Education of Long Island City, in directing the reading of a portion of the Bible, as an opening exercise in the schools under their charge during school hours, and in excluding pupils from those schools, or any of them, on the ground of declining to be present at such reading, has been without warrant of law.

The appeals must therefore be, and are hereby sustained. The proper course for those who are dissatisfied with the rule established by the decisions above cited, and who desire a different or more explicit regulation on the subject, is to apply to the legislature for such enactments as will meet their views. Contentions about the construction of general principles of law might thus be obviated by plain statutory provisions.

All persons, otherwise entitled to attend any of the schools of Long Island City, and who have been and are excluded therefrom for a refusal to be present at the reading of the Bible therein, have the right to be admitted to such schools upon the same footing as other pupils rightfully attending them; and it is, therefore, the duty of the said Board of Education to see that the right of all such persons, in that respect, is accorded to them.

This decision must be filed with the clerk of the Board of Education of Long Island City, and notice thereof must be given by him to the members of the Board, and to the appellants in the appeals above, numbered 2 and 3, with opportunity to examine the same.

Given under my hand and the seal of the Department of Public Instruction at Albany, this 5th day of June, 1872.

ABRAM B. WEAVER,  
Superintendent of Public Instruction.



# *From the Great Industries of the United States.*

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## I.

### EDUCATION: ECONOMICAL AND EFFICIENT.

THE EDUCATION BUSINESS. — EIGHT MILLION CHILD-PATRONS. — GIGANTIC CAPITAL INVESTED. — TWENTY-SIX HUNDRED SCHOOL-BOOKS. — NO HISTORY OF EDUCATION. — PRACTICAL TENDENCY OF EDUCATION REFORM. — OBJECT-TEACHING TWO CENTURIES AGO. — A QUART OF BLACKBOARD. — OLD-FASHIONED SCHOOLS. — REBELLION AGAINST GRAMMAR. — THE REAL ROYAL ROAD TO KNOWLEDGE. — FIRST ORGANIZATION OF THE IMPROVED SCHOOL APPARATUS BUSINESS. — ORIGIN AND RISE OF THE HOUSE OF J. W. SCHERMERHORN AND CO. — EXTENT OF THEIR OPERATIONS. — CONTENTS OF THEIR MUSEUM. — MODERN APPARATUS. — MASTER TELESTON AND THE PEN-WIPER. — PUBLISHING DEPARTMENT.

IMPROVEMENTS in the methods and in the machinery of education and schools have a value in a mental and moral point of view which has been endlessly talked about, and is pretty well understood. But their importance, as a matter of every-day business, in dollars and cents, is not so often mentioned, and is less familiar. And yet the business part of education, even leaving the immortal soul for the moment out of the question, ranks, in point of money importance, in the same grade with the cotton business, the woollen business, the grain trade, or the shipping interest.

That this is so will quickly be perceived, if we only remember that about one-fifth of the whole number of souls in the United States are always occupied in attending schools or other educational institutions; that is, at present, not far from eight million pupils, besides about one hundred and sixty thousand teachers. The books alone used by this vast army at any one time have cost at the very least twenty millions of dollars; the seats, desks, and other apparatus, thirty millions of dollars—together, fifty millions of dollars. The investment of capital in school-houses and other buildings, in lands, college endowments, etc., is several times as much as this; one single item, viz., fifty million acres of public lands, given by Congress at one time for educational purposes, being alone equal in value to the items of books and furniture. To all these must be added, further, a capital whose interest would equal the annual total sum paid to teachers; a still further considerable item for libraries; another for reference-books and professional works owned by teachers; and the

total amount of the business investment of the United States in education becomes absolutely gigantic.

Perhaps another fact will add to the distinctness of our picture. It is well known that as much as twenty thousand dollars has repeatedly been invested in preparing, printing, and distributing some single new school-book before the receipt of any returns from it, with the expectation that subsequent sales would reimburse the whole, with abundant profits. Very well: there are in the market to-day (besides books which have become obsolete) about twenty-six hundred different school-books. Of course the investment for "introducing" these has often been comparatively small; but if there are so many competitors for a patronage which it may cost so much to obtain, that must be an enormously lucrative patronage.

No competent history of education exists, in English; although German literature contains many works on the subject, and abundant materials for it are dispersed throughout English literature, particularly in the essay and biographical departments. But any one at all versed in the general subject will recognize the truth of the statement that, since the time of the "revival of classical learning" in Europe, which took place just after the capture of Constantinople by the Turks, and just before the Protestant Reformation, one line of progress more distinct than any other can be clearly traced along the whole history of modern education—namely, improvement in the *practical* character of education.

This practical tendency has always belonged to the prominent educational reformers, and has characterized all the improved educational systems, as compared with those that preceded them. We find Comenius, in the days of Oxenstiern and the Thirty Years' War, laying down with perfect distinctness the very doctrine which is to-day most prominent among the improvements now in progress, to wit, the Object Lesson system. He says, "Things and words should be studied together; *but things especially*, as being the object both of the understanding and of language." This same idea, indeed, was the basis of his famous *Orbis Pictus*, a collection of pictures of natural objects with explanations, in connection with which he intended that the objects themselves were to be used as far as possible. This work has been a favorite German school-book for two hundred years—a duration of popularity more than doubling that of Webster's Spelling-Book.

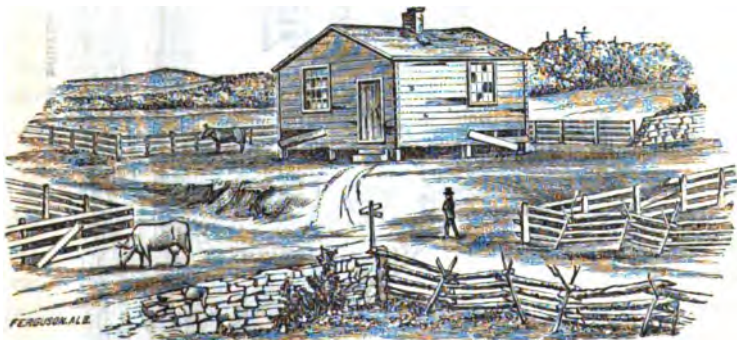
To pass at once to the affairs of the present day. The condition of the educational interest of the United States, so far as it is to be looked at on the business side, presents two especially striking

features. These are—first, the rapidly-advancing practice of educating through the senses, and about things, instead of educating about words, and through the memory; and as a means of accomplishing this, the increased use of improved apparatus of all kinds, from the school-house itself, with its symmetrical and elegant furniture and fittings, to models and machinery of all kinds, and even down to the minute details of crayons, erasers, rods, inkstands, and hat-pegs; and second, the use of capital, machinery, and inventive ability for supplying these improved instrumentalities at once in great quantities and at cheap rates—that is, according to the spirit of modern civilization.

One question, to-day a perfectly reasonable one, but which at any past period in the history of schools would have been perfectly absurd, may serve to illustrate the changed character of the new order of things:—

“What is the price of a quart of blackboard?”

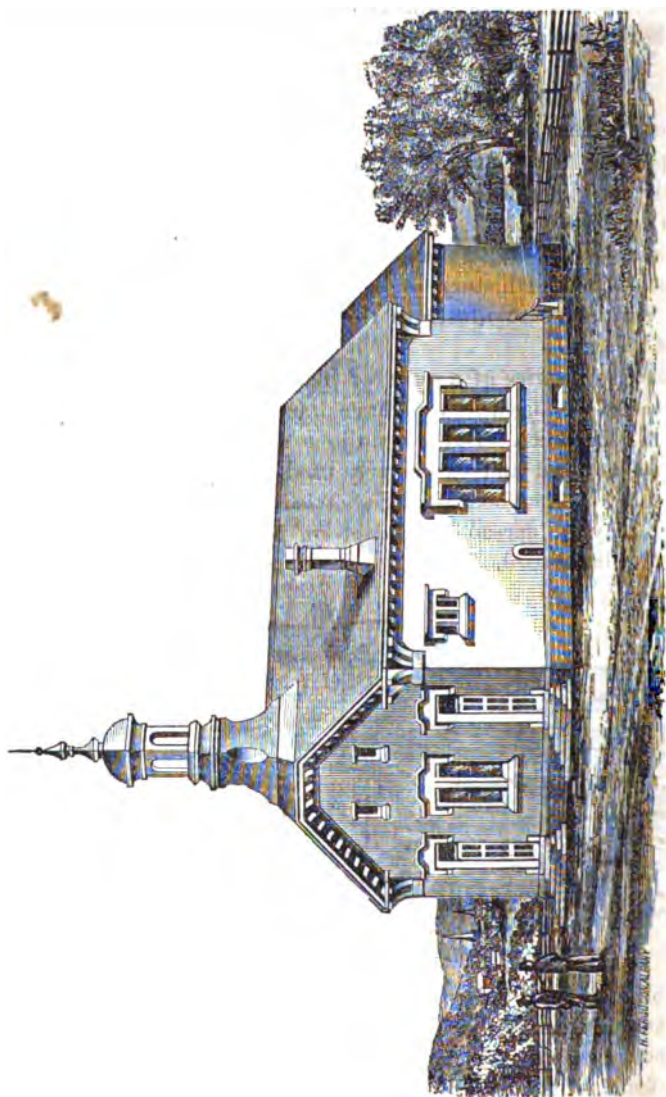
Heretofore we might as well have inquired for a yard of oil, or a pound of conscience. But it is no joke at all; a material is regularly manufactured and extensively used, which is neither more nor less than liquid blackboard. It is bottled or canned for carriage and keeping; may be spread like paint on board, paper, or wall, and becomes a blackboard.



THE OLD-FASHIONED SCHOOL-HOUSE.

The old-fashioned “district school” has, within the memory of very many persons now living, been the prevailing type of school-house and apparatus; and, indeed, abundance of specimens of it may yet be found. It is a clapboarded shanty, and perhaps a log hut; its walls within fringed, so to speak, with a sloping board for a desk, while parallel to this are slabs for seats, upheld by straddling legs cut from green poles, with the bark still on them. Perhaps other

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THE MODERN COUNTRY SCHOOL-HOUSE.

## EDUCATION : ECONOMICAL AND EFFICIENT.

desks and seats, on the same principle, occupy part of the floor. Each pupil has a speller, a reader, an arithmetic, and possibly a geography and atlas; perhaps there is a blackboard, and very likely there is a rattan, a ferule, or even a rawhide within reach of the teacher's hand. No wall maps; no globe; no apparatus of any kind, unless a painted pail and a tin dipper may be called such, for illustrating hydraulics and hygienics at once. As for a school library or any real "apparatus," as well expect to find a grand piano growing in the woods. It has happened within the last twenty years that a rebellion broke out among the intelligent parents of a certain school district in the educationally famous State of Connecticut, because the teacher ventured—not to make the district pay for globes, or maps, or pictures, or anything else, but—to *teach grammar!*

However, the number of such abodes of darkness decreases. The present spirit of the schools is represented by a very different affair—by the first-class graded school, with its elegant architecture, home-like and healthful warmth and fresh air, neat and comfortable desks and seats, abundance of text-books, well-chosen library, varied assortment of maps, charts, globes, and primary and scientific apparatus of all kinds, in short, by an array of contrivances for shortening, clearing, and easing the way of the scholar, and for speeding his progress upon it, so numerous and so effective that the time-honored maxim, "There is no royal road to knowledge," is pretty much done away. There is one; it lies through the improved common school; the sovereign for whom it has been contrived is the Sovereign People.

Unquestionably the utmost point thus far reached, in this process of organizing and combining for the supply of mental training on business principles, is shown in the existence and operations of a central depot for exhibiting and distributing school material. Fifteen years ago no such depot existed. The boys and girls in the country could get their spelling-books, arithmetics, and slate pencils where their fathers bought their codfish and molasses, and their mothers their calico and thread—at the country store. In the cities there were publishers and booksellers, in case of a wholesale order for the like commodities. But it was not easy to obtain much more. Some of the simpler articles of school apparatus now in common use, were not unknown, but, in order to obtain them, the enterprising teacher or trustee must visit as many different places as there were articles named on his memorandum. Prices were high, the supply small, the shops or garrets where each article might be had were obscure,

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and dispersed throughout the city. Of course these articles were usually not supplied, and the efficiency and improvement of the schools were seriously impeded accordingly. A few feeble attempts had been made to establish the manufacture of some of the most important apparatus, but without enough of either capital, or energy, or knowledge of what was required, to attain success.

In 1858, a schoolmaster, now principal of the house of J. W. Schermerhorn & Co., of New York, having learned in his professional experience the wants of the schools, and having studied the needs of the times, conceived the idea of a general depot for school material of all kinds. In this one centre, according to his conception, should be gathered and displayed specimens of furniture, apparatus, stationery, books,—everything useful in the school-room. It was to be an exhaustive museum of educational merchandise, where all things in that line could be seen by all men—and women; in fact, a perpetual world's fair of school material.

In 1859, a connection was made with the American School Institute, and the proposed business was actually set on foot in Philadelphia. In 1861, it was found expedient to remove the base of operations to New York. It quickly became evident that, in order to adequately develop the enterprise, a department for the manufacture of school merchandise must be added. Mr. George M. Kendall, who had been identified with the enterprise from the first, assented to the suggestion; in 1865, Mr. George, Munger, an inventor of celebrity, whose articles had been extensively ordered through the house, joined it as a partner, and manufacturing was soon afterward begun at Guilford, Conn. Mr. W. P. Hammond joined his interests with those of the gentlemen already named, and not long afterward three enterprising capitalists—Messrs. Nelson Crawford, Thomas Bell, and Samuel P. Bell—invested funds in the house.

No gigantic fortunes have yet been made in the operations of this modern and very original concern. The nature of the trade is such that the margin of profit cannot be heavy; and in the early period of such enterprises there is always a great and apparently wasteful outlay of money, thought, and labor, in creating and improving. Our country is yet new. Vast as the existing school mercantile interest already is, we have, in fact, barely entered the real school-organizing period. The business of the firm hitherto has partaken largely of a missionary character; has drawn heavily upon the faith of its managers and supporters. But the original projector of the house, as well as his partners in it, have not at all lost confidence in the importance of the school interest, and in the magnitude of the part

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which they must play in working out American destiny; nor, accordingly, have they any fear for the ultimate success of their undertaking in a business point of view. It would be an unprecedented violation of the laws of business should such industry, perseverance, pluck, and fertility of contrivance remain permanently unrewarded.

Indeed, the business has already fully verified the predictions of its founder as to the main principles involved. It was believed that there was a national demand for such a central depot as this in the business metropolis of the nation; and the operations of the house have become national. Its premises are a regular resort for persons interested in education from all parts of the country, and its agencies are open in most of the principal cities of the Union. Its trade extends from Canada to the Mexican border, and from Maine to California. Orders from England are frequent; trade with South America is large; Honolulu, and other localities of the islands of the sea, make frequent demands upon the facilities of the house; it has furnished the public schools of Melbourne, in Australia; and distant missionary stations, as they establish schools, are habitually resorting here for supplies.

No more vivid representation of the advance of educational improvements for the last quarter of a century could be made than is supplied by a contrast between the catalogue which Messrs. J. W. Schermerhorn & Co. publish of the school material kept on hand by them, and a similar one of twenty-five years back. On one hand, a handsomely printed volume of a hundred and fifty pages, containing two hundred and forty-four elegantly executed wood-cuts, to begin with; and specifying the names and prices of several hundred books, describing dozens of different courses of study; cataloguing not merely the articles represented in the illustrations, numerous as they are, but twenty times as many, with prices at retail and wholesale, suggestions for use, etc., etc., to the extent of being substantially a practical pictorial educational encyclopædia. So much for the list of to-day. As for that of twenty-five years back—there is none.



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It is out of the question to give within the limits of a paper like the present even an approach to a full summary of the materials thus catalogued and represented. But a list of the names of fifty of the items, picked out in turning over the pages, and which we throw into an alphabetical order, will surprise any one not thoroughly familiar with the subject, so varied are the articles, and so wide the range of knowledge illustrated, processes of study assisted, and devices contrived:—

Abacus, alphabet blocks, arithmetical solids, barometer, book carrier, color cube, crayon holder, croquet set, cube root blocks, dissected cone, dividers (for blackboard use), drawing paper, dumb bells, eraser, geometrical forms and solids, globe (slated), gonigraph, hat rack, hydrometer, Indian clubs, kindergarten blocks, letter clip, liquid blackboard, lunch box, magic lantern, magnet, mariner's compass, mathematical instruments, microscope, organ, orrery, pencil file, planisphere, prism, rain gauge, Rogers' school groups, school bags, season machine, shoe scraper, slate rest, song roll, spelling stick, stream of time, sweeper, tape measure, tellurian, thermometer, wall slate, wands (for exercise), waste basket.

This list, it will be observed, omits such obvious items as chair, desk, ink, paper, etc. It is not unlikely that some of our readers

may have to stop and think before they can tell what some of these things are for. What is a gonigraph? a pencil file? a season machine? a spelling stick? "Gony" is, or used to be, a slang term for "a silly fellow;" does a gonigraph describe gonies? Is the file to sharpen the pencil or to keep it? Can your season machine turn out weather to order? Will a stick spell? Even the man of to-day might almost be imagined to put these questions. But please to hear about Master Tileston and the pen-wiper, and then imagine what that excellent old gentleman would have said to



ROGERS' GROUP—SCHOOL EXAMINATION.

Schermerhorn & Co.'s catalogue of school material. Master Tileston, who died not far from 1824, at the age of eighty-five or



more, was writing-master in one of the Boston schools for over half a century. Sundry curious anecdotes are told about the good old gentleman; but that which is to the present point, and which was recorded by one of his pupils, is as follows: This pupil had become apprentice in a book-store, when his old instructor entered the store: "Out of respect for the venerable man, the pupil wiped his pen on a rag that hung by the desk for that purpose, and suspended his work. The old gentleman approached the desk, and carefully raising the rag with his thumb and forefinger, said, 'What is this for?' 'To wipe the pen on, sir, when we stop writing,' said the respectful pupil. 'Uh! it may be well enough,' said he, 'but Master Proctor had no such thing!' Master Tileston always *wiped out his pen with his little finger, and then cleaned his finger on the white hairs just under his wig*. His model, Master Proctor, had been dead half a century, perhaps, but he still lived in the routine that he had established."

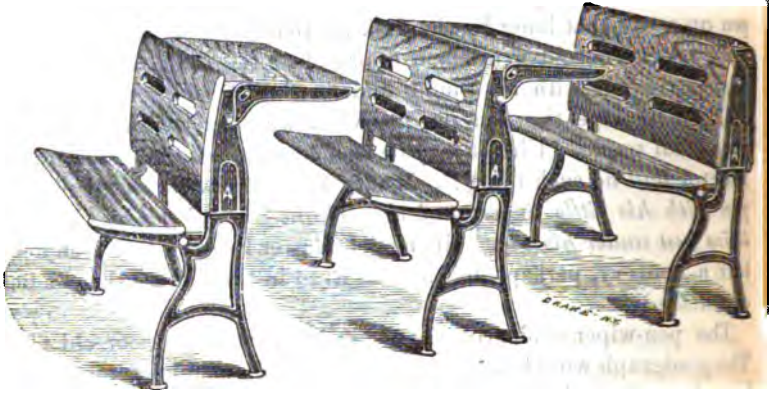
The pen-wiper evidently was a sore burden to the poor old man. The gonigraph would have staggered him; the magic lantern would have been little better than sacrilege in his eyes; and the Indian clubs would have beaten his very life out. And yet this comprehensive and seemingly heterogeneous variety of school material corresponds to a very wise saying of a very judicious old gentleman of far more ancient date than Master Tileston—that famous and practical Greek, the Spartan King Agesilaus—who, on being asked, "What ought children to learn at school?" replied, "Whatever they will need to do as men."

Besides the extensive arsenal—so to speak—of educational ordnance and munitions of war wherewith to teach the young idea how to shoot, the house keeps on hand a full specimen assortment of all the best school-books, and furnishes them in the same manner as apparatus, maps, or furniture. Moreover, it publishes, from time to time, books of its own, the last being Professor Johonnot's "School-Houses," with designs by Hewes—an elaborate work, bringing its subject down to the very latest dates, and with a great number of drawings and plans for school-houses of all sorts, materials, and sizes. And lastly, it issues THE AMERICAN EDUCATIONAL MONTHLY, a lively periodical, which serves as a record of contemporary educational history, doctrine, and practice, and as a common organ of communication among those interested in schools and other institutions and instrumentalities of learning.

Such an institution as has thus been described could not exist except amidst a great number of highly improved and improving

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schools. It at once lives by them, and helps them live; and while it is justly entitled to large pecuniary success, it is at the same time incomparably most significant as an index and engine of mental and moral improvement.



**THE ASSEMBLY-ROOM DESKS AND SETTEES, WITH ALLEN'S OPERA FOLDING SEATS.**

## OUR IMPROVED Modern School Furniture.

---

**T**HE very decided advantages of our Furniture have induced a popular appreciation and demand hitherto unknown in the history of similar enterprises. Its national reputation and general use in the United States, as well as its large demand from foreign countries, have sprung from the following peculiar merits :

1. All the seats and backs are curved to precisely fit the persons of pupils — hence they are most comfortable. Correct Physiological Principles have been carefully observed in the construction of our Furniture.
2. All seats are folding — permitting pupils to take and leave their places without difficulty and disturbance; enabling the teacher to call up every pupil promptly at a given signal; giving capacity to the School-room for light Gymnastics; admitting free passages across the room, and giving opportunity to clean the floors.
3. All Desks and Settees are readily taken apart, and shipped flat — hence transportation is very cheap.
4. The patented manner of dove-tailing the parts makes warping, shrinking, and swelling impossible — hence they are enduring.
5. Our Furniture is superior in appearance, and finished in workmanship.
6. It is cheaper even than the inferior styles.

In fact, we were the first to establish style in furnishing Schools. Some other manufacturers, to save their business, have felt compelled to try to imitate us, as far as our patents, and their own taste and facilities will permit.

## REFERENCES.

For purposes of reference and examination, we give a list of some of the Schools which we have recently supplied with School Furniture.

It is a significant fact that our Furniture is so satisfactory to our customers that we dare publish their names.

### NEW YORK.

|                         |                            |                         |                             |
|-------------------------|----------------------------|-------------------------|-----------------------------|
| Albany.....             | Miss Ryan's School.        | Gold Spring.....        | School District No. 12.     |
| ".....                  | Cathedral.....             | College Point.....      | School District No. 7.      |
| ".....                  | Miss Hewitt's "            | ".....                  | Miss Walther's School.      |
| ".....                  | Board of Education.        | Copake Iron Works.....  | Public School.              |
| Amenia.....             | Amenia Seminary.           | Oroton Falls.....       | " "                         |
| Ashford.....            | Public School.             | Oroton Landing.....     | " "                         |
| Astoria.....            | " " No. 3.                 | Centreport.....         | " "                         |
| Athens.....             | " " No. 6.                 | Dikeman's.....          | Miss Gay's School.          |
| ".....                  | J. J. Vosburg, Trustee.    | Dobbs Ferry.....        | Miss Dana's "               |
| Auburn.....             | High School.               | ".....                  | Miss Hinton's "             |
| Bay Shore.....          | Public School.             | East New York.....      | Public School.              |
| ".....                  | Chas. M. Howell, Trustee.  | ".....                  | Rev. Mr. Creighton's Sch.   |
| Bedford Station.....    | Public School.             | East Irvington.....     | Mrs. Ropes' School.         |
| Benton.....             | " "                        | East Chester.....       | School District No. 1       |
| Blue Point.....         | H. Bishop, Trustee.        | ".....                  | " " No. 2                   |
| Brewster's Station..... | Public School.             | Elmira.....             | High School.                |
| ".....                  | Public Hall.               | Edgewater.....          | Public "                    |
| ".....                  | Public School No. 13.      | Far Rockaway.....       | " "                         |
| ".....                  | F. E. Foster, Trustee.     | Fishkill.....           | District No. 12.            |
| Bronxville.....         | School District No. 3.     | Fishkill Landing.....   | Miss Wagner's School.       |
| Brooklyn.....           | Adelphi Academy.           | Flatbush.....           | Erasmus Hall Academy.       |
| ".....                  | Edward Brown's School.     | ".....                  | Public School No. 1.        |
| ".....                  | F. D. Longchamp's "        | ".....                  | Dr. J. L. Zabrickie.        |
| ".....                  | H. Alegen's "              | Flushing.....           | Public School No. 4.        |
| ".....                  | Irving Seminary.           | ".....                  | " " No. 7.                  |
| ".....                  | Miss Dudley's Seminary.    | ".....                  | St. Joseph's Academy.       |
| ".....                  | Mr. Bigelow's School.      | ".....                  | Mrs. S. E. Lincoln.         |
| ".....                  | Mr. Mordangh's "           | Fordham.....            | Public School No. 2.        |
| ".....                  | Mrs. Adams' "              | ".....                  | " " No. 4.                  |
| ".....                  | Mrs. Burnett's "           | Fort Washington.....    | N. A. Le-pinassee's School. |
| ".....                  | Mrs. Hilton's "            | Friendship.....         | A. J. W. Ilman.             |
| ".....                  | Mrs. Marvin's "            | Freeport.....           | M. Barr.                    |
| ".....                  | Packer Institute.          | Garrison's Landing..... | Public School.              |
| ".....                  | Prof. Cheneviere's School. | Glen's Falls.....       | Glen's Falls Academy.       |
| ".....                  | Prof. Everett's School.    | Green Island.....       | Public School.              |
| ".....                  | Prof. Giraud's Seminary.   | Great Neck.....         | " "                         |
| ".....                  | Slayers of the Visitation. | Harlem.....             | Harlem Academy.             |
| ".....                  | Rev. Dr. Lewin's School.   | ".....                  | Miss Jackson's School.      |
| ".....                  | Mrs. Harvey's "            | Havana.....             | People's College.           |
| ".....                  | Mr. Dunn's "               | Haverstraw.....         | School District No. 1.      |
| Catskill.....           | Free School.               | ".....                  | " " No. 2.                  |
| ".....                  | Public "                   | ".....                  | Mrs. Batchelder's School.   |
| ".....                  | Rectory "                  | Herkimer.....           | Public School.              |
| Castleton.....          | School District No. 2.     | Hempstead.....          | School District No. 12.     |
| ".....                  | Mrs. Hunt's School.        | Highland Falls.....     | Mrs. Carswell's School.     |
| Chester.....            | Public School.             | Highland Mills.....     | Public School.              |
| Canandaigua.....        | Ontario Orphan Asylum.     | Hudson.....             | Hudson Academy.             |
| Chatham Village.....    | Marks B. Stewart.          | ".....                  | Board of Education.         |
| City Island.....        | Public School.             | ".....                  | J. E. Gillette.             |
| Clarkstown.....         | " "                        | Huntington.....         | Public School.              |
| Clifton.....            | St. Mary's Academy.        | ".....                  | Union "                     |
| Cohoes.....             | Board of Education.        | Hoosick Falls.....      | School District No. 14.     |

# REFERENCES.

|                       |                                     |
|-----------------------|-------------------------------------|
| Islip.....            | Public School.                      |
| Ithaca.....           | Cornell University.                 |
| ".....                | { University Preparatory<br>School. |
| Jamaica.....          | School District No. 6.              |
| ".....                | Public School.                      |
| Katonah.....          | Alsoph Green.                       |
| Kensico.....          | J. W. Booth.                        |
| Livingston.....       | Rev. T. S. Dusenberre.              |
| Little Falls.....     | School District No. 1.              |
| ".....                | William A. Brown.                   |
| Long Island City..... | First Ward Public School.           |
| Mamaroneck.....       | Public School.                      |
| Manhasset.....        | " "                                 |
| Malden.....           | " "                                 |
| Margaretville.....    | Swart & Winter.                     |
| Matteawan.....        | Public School.                      |
| McGrawville.....      | " "                                 |
| Merrick.....          | School District No. 7.              |
| Middletown.....       | " " No. 17.                         |
| ".....                | Public School.                      |
| Milton.....           | Mrs. Myers' School.                 |
| Monroe.....           | Public School.                      |
| ".....                | W. K. Smith.                        |
| Morrisania.....       | German American School.             |
| ".....                | Public School No. 1.                |
| ".....                | " " No. 3.                          |
| ".....                | " " No. 4.                          |
| ".....                | " " No. 5.                          |
| Mount Hope.....       | School District No. 5.              |
| Mount Lebanon.....    | Public School.                      |
| Mount Vernon.....     | Board of Education.                 |
| Montgomery.....       | School District No. 7.              |
| Newburgh.....         | Home for the Friendless.            |
| ".....                | Board of Education.                 |
| ".....                | School District No. 1.              |
| New Lots.....         | " " No. 3.                          |
| New Palts.....        | New Palts Academy.                  |
| New Rochelle.....     | Locust Ave. Seminary.               |
| ".....                | Miss Adams's School.                |
| ".....                | Public School.                      |
| New Utrecht.....      | " "                                 |
| New York City.....    | Bowery Industrial School.           |
| ".....                | Children's Aid Society.             |
| ".....                | Child's Nursery.                    |
| ".....                | Colored School No. 3.               |
| ".....                | German American School.             |
| ".....                | Dr. Somer's School.                 |
| ".....                | French-English Institute.           |
| ".....                | Grammar School No. 12.              |
| ".....                | " " No. 39.                         |
| ".....                | " " No. 51.                         |
| ".....                | " " No. 53.                         |
| ".....                | { Leake & Watts' Orphan<br>House.   |
| ".....                | Madame Mears' School.               |
| ".....                | Madame Heritau's "                  |
| ".....                | Miss Arbuckle's "                   |
| ".....                | Miss Goodwin's "                    |
| ".....                | Miss Jaudon's "                     |
| ".....                | Miss Warren's "                     |
| ".....                | Miss Youmans' "                     |
| ".....                | Miles. Charbonniers' Sc'l.          |
| ".....                | Miss Ellis's School.                |
| ".....                | Mrs. Storrs' "                      |

|                         |                                           |
|-------------------------|-------------------------------------------|
| New York City.....      | Mr. Emmerich's School.                    |
| ".....                  | Mr. Farrand's School.                     |
| ".....                  | Mr. Colton's "                            |
| ".....                  | Mr. Prevost's "                           |
| ".....                  | Mrs. Ritter's "                           |
| ".....                  | Mr. Van Rhy'n's School.                   |
| ".....                  | New York Orphan Asy'l'm.                  |
| ".....                  | { Orphanage of Church of<br>Holy Trinity. |
| ".....                  | St. Columbus School.                      |
| ".....                  | St. Matthew's Academy.                    |
| ".....                  | St. Catherine's Convent.                  |
| ".....                  | St. Jerome's Ch. School.                  |
| ".....                  | { Immaculate Conception<br>School.        |
| ".....                  | { Holy Communion Par-<br>ish Schools.     |
| ".....                  | Rev. J. P. Smith.                         |
| North New York.....     | { Rev. Father Hughes'<br>Schools.         |
| North Salem.....        | Public School.                            |
| Nyack.....              | Rev. H. Ten Broeck.                       |
| ".....                  | Miss Anna Burgh.                          |
| Otisville.....          | John Mullock.                             |
| Oxford Depot.....       | Public School.                            |
| Oyster Bay.....         | School District No. 1.                    |
| ".....                  | Rev. C. S. Wightman.                      |
| Patterson.....          | Public School.                            |
| Peekskill.....          | School District No. 6.                    |
| ".....                  | " " No. 3.                                |
| ".....                  | Public School.                            |
| Port Jervis.....        | Dr. Wilbur's School.                      |
| ".....                  | Union School No. 1.                       |
| Port Chester.....       | Dr. J. F. Bowron.                         |
| Port Leyden.....        | Public School.                            |
| Poughkeepsie.....       | School District No. 6.                    |
| ".....                  | Mr. Brown's School.                       |
| ".....                  | Riverview Military Acad.                  |
| ".....                  | White Bros. & Co.                         |
| Prattsburg.....         | Public School.                            |
| Ramapo.....             | School District No. 2.                    |
| Red Rock.....           | Public School.                            |
| Rondout.....            | " "                                       |
| ".....                  | Union Free School.                        |
| Rhinecliff.....         | Rev. Thos. S. Savage.                     |
| Roalyn.....             | Public School.                            |
| Sand Lake.....          | School District No. 4.                    |
| Sandy Hill.....         | Union School.                             |
| Saratoga.....           | Mrs. Walworth's School.                   |
| Saratoga Springs.....   | Public School.                            |
| Saugerties.....         | School District No. 21.                   |
| Scarsdale.....          | Public School.                            |
| Schodack.....           | School District No. 3.                    |
| Schuylerville.....      | " " No. 5.                                |
| ".....                  | Dr. Payn's School.                        |
| Schenectady.....        | Duncan McDongal.                          |
| Schaghtlooke.....       | Julius E. Butts.                          |
| ".....                  | District No. 16.                          |
| Sing Sing.....          | S. R. Stone.                              |
| ".....                  | J. D. Post's School.                      |
| South Glen's Falls..... | H. W. Barker.                             |
| Southhold.....          | J. B. Terry.                              |
| Stony Point.....        | School District No. 1.                    |
| Spring Valley.....      | Spring Valley Academy.                    |
| ".....                  | Erastus Johnson.                          |

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|                     |                                   |                     |                          |
|---------------------|-----------------------------------|---------------------|--------------------------|
| Stephentown.....    | School District No. 1.            | Watertown.....      | Henry J. Hopkins.        |
| Spuyten Duyval..... | School District No. 3.            | Watervliet.....     | Public School.           |
| St. Johnsville..... | School District No. 2,<br>Danube. | Warwick.....        | School District No. 3.   |
| Syracuse.....       | Mrs. Dickenson's Sem-<br>inary.   | ".....              | Lazear & Demarest.       |
| Tarrytown.....      | Mr. Gullibert's School.           | Weedsport.....      | Union School.            |
| ".....              | Mr. Jackson's " "                 | Westchester.....    | Public School No. 1.     |
| ".....              | Mr. Wilkinson's " "               | ".....              | " " No. 2.               |
| Tremont.....        | Public School.                    | West Farms.....     | Miss Cathell's School.   |
| Troy.....           | Board of Education.               | ".....              | " " No. 3.               |
| ".....              | First Ward School.                | ".....              | " " No. 4.               |
| ".....              | Fourth " " "                      | West Town.....      | Public School.           |
| ".....              | Troy Academy.                     | Williamsburgh.....  | H. C. Blackmar.          |
| ".....              | Christian Bros. Academy.          | Winsbridge.....     | School District No. 6.   |
| ".....              | St. Peter's School.               | Whitehall.....      | Public School.           |
| ".....              | Miss Purdy's " "                  | White Plains.....   | " " "                    |
| ".....              | Campbell & Vaughn.                | ".....              | Mrs. Steiwagon's School. |
| ".....              | George Harrison.                  | Whitestone.....     | Miss Carley's " "        |
| Tuckahoe.....       | Public School.                    | Williamsbridge..... | Public School.           |
| Tully.....          | School District No. 2.            | Woodhaven.....      | School District No. 7.   |
| Turner's.....       | T. R. Earl.                       | Yonkers.....        | Public School.           |
| Upper Piermont..... | Mr. Cowles' School.               | ".....              | Miss David's School.     |
| ".....              | Mr. Bauer's " "                   | ".....              | Mr. Hooper's " "         |
| Valley Falls.....   | Public School.                    | ".....              | Wm. Allen Butler.        |
|                     |                                   | ".....              | Turner & Co.             |
|                     |                                   | Yorktown.....       | School District No. 6.   |

## NEW ENGLAND.

|                           |                                         |                          |                            |
|---------------------------|-----------------------------------------|--------------------------|----------------------------|
| Amherst, N. H.....        | James C. Boutelle.                      | East Falmouth, Mass..... | J. O. Robinson.            |
| Andover, Mass.....        | Public School.                          | East Taunton, ".....     | Public School.             |
| ".....                    | E. F. Holt.                             | ".....                   | " " N. W. Shaw.            |
| Ansonia, Conn.....        | High School.                            | East Haven, Conn.....    | Public School.             |
| ".....                    | Public School.                          | Erving, Mass.....        | N. J. Benjamin.            |
| Ashland, Mass.....        | Rev. M. M. Cutter.                      | Fairhaven ".....         | Public School.             |
| Assabet ".....            | John Hillis.                            | Falls Village, Conn..... | Mr. Spurr.                 |
| Barrington Centre, R. I.  | Public School.                          | Fair Haven, ".....       | Public School.             |
| Bennington, Vt.....       | Bennington Graded Sch'l.                | ".....                   | H. B. Brown.               |
| Boston, Mass.....         | Boston Theological Sem'y                | ".....                   | J. P. Merrow.              |
| ".....                    | Miss Welchman's School.                 | Framingham, Mass.....    | Public School.             |
| Branchville, Conn.....    | Public School.                          | ".....                   | G. B. Brown.               |
| Bridgewater, ".....       | H. H. DuBola.                           | Franklin, ".....         | S. W. Squire.              |
| Bridgeport, ".....        | Public School.                          | Gleadow, ".....          | Public School.             |
| ".....                    | Waterville School Dist.                 | Granderville, ".....     | " " "                      |
| ".....                    | Tollisome Hill " "                      | Greenfield, ".....       | " " "                      |
| ".....                    | Union " " "                             | ".....                   | David Mowry.               |
| ".....                    | Ieland Brook " " "                      | ".....                   | J. F. Moors.               |
| ".....                    | Misses Ward and Hins-<br>dale's School. | ".....                   | C. C. Conant.              |
| Brighton, Mass.....       | P. C. Winship.                          | Greenville, Conn.....    | Public School.             |
| ".....                    | Joseph Bennett.                         | Great Barrington, Mass.  | Grazmar " "                |
| Chapinville, Conn.....    | Public School.                          | ".....                   | High " "                   |
| Cheshire, ".....          | Episcopal Academy.                      | ".....                   | Charles Watson.            |
| Clinton, ".....           | Public School.                          | Greenwich, Conn.....     | Meeting House Sch'l Dist.  |
| Cohasset, Mass.....       | " " "                                   | ".....                   | Byrum " " "                |
| Concord, ".....           | " " "                                   | ".....                   | Round Hill " " "           |
| Danbury, Conn.....        | Mrs. White's School.                    | ".....                   | Stanwich Upper " " "       |
| Danielsonville, Conn..... | Public School.                          | Groveland, Mass.....     | Public School.             |
| Darien, ".....            | Darien Seminary.                        | Hartford, Conn.....      | Mr. Thompson's School.     |
| ".....                    | Miss Rice's School.                     | ".....                   | Meadow " "                 |
| Dayville, ".....          | Public School.                          | ".....                   | Miss Hyde's " "            |
| Eagleville, ".....        | " " "                                   | Hatfield, Mass.....      | Public " "                 |
| East Braintree, Mass..... | " " "                                   | Holyoke, ".....          | Rev. Father P. J. Harkins. |
| ".....                    | A. Mason.                               | Hinsdale, ".....         | E. H. Goodrich, Jr.        |
| East Bridgewater, ".....  | Public School.                          | Holliston, ".....        | N. J. Parmenter.           |
| ".....                    | E. W. Nutter.                           | ".....                   | E. T. Whiting.             |

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| Hull, Mass.             | D. W. Dill.                 | Orange, Mass.           | H. N. Moore.             |
| Jamaica Plains, Mass.   | Prof. D'Eghent.             | Peru, Mass.             | Public School.           |
| Kent, Conn.             | Kent Cottage Seminary.      | "                       | G. L. Thomson.           |
| Lakeville, Conn.        | Public School.              | Pittsfield, "           | Miss Salisbury's School. |
| Lancaster, Mass.        | Arby Ety.                   | Plantville, Conn.       | Public School.           |
| Lee, "                  | Public School.              | "                       | H. D. Smith.             |
| "                       | John Branning.              | Plymouth, "             | E. Warner.               |
| Lisbon, Conn.           | Public School.              | Portland, Me.           | A. L. Dresser.           |
| Littleton, Mass.        | "                           | Poultney, Vt.           | Public School.           |
| "                       | G. W. Fuller.               | "                       | Rev. E. H. Randall.      |
| "                       | Gardner Pronty.             | Putnam, Conn.           | Public School.           |
| Ladlow, Vt.             | J. R. Spofford.             | Rochester, N. H.        | R. F. Hanscom.           |
| Madison, Conn.          | Lee's Academy.              | Rutland, Vt.            | Rutland Graded School.   |
| "                       | North West School Dist.     | "                       | Ben. K. Chase & Co.      |
| "                       | Public School.              | Saugus Centre, Mass.    | E. P. Robinson.          |
| Manchester, Mass.       | G. A. Priest.               | Saybrook, Conn.         | Centre School District.  |
| Mechanicville, Conn.    | Public School.              | "                       | Seabury Institute.       |
| Middleboro, Mass.       | E. W. Drake.                | Sharon, "               | Sharon Institute.        |
| Middlebury, Vt.         | Middlebury College.         | "                       | C. H. Shears.            |
| Middlefield, Mass.      | Public School.              | Shelburne, Mass.        | Pliny Fisk.              |
| "                       | G. W. Cottrell.             | South Hanson, Mass.     | W. H. H. Bryant.         |
| Milford, "              | Public School.              | Southport, Conn.        | Miss Smith's School.     |
| Millbury, "             | P. Simpson.                 | South Manchester, Conn. | Public School.           |
| Miller's Falls, "       | J. S. Cousins.              | "                       | Cheney Brothers.         |
| Montague, "             | Public School.              | South Norwalk, "        | Miss Hogan's School.     |
| Natick, "               | "                           | Spencer, Mass.          | Public School.           |
| New Britain, Conn.      | School District No. 1.      | Stockbridge, "          | Mr. Reid's School.       |
| "                       | Centre School District.     | "                       | M. Warner, Trustee.      |
| "                       | Shipman " "                 | Stoneham, "             | W. B. Stevens.           |
| "                       | Stanley Quarter Sch'l Dist. | Stamford, Conn.         | Miss Czarnonska's Sch'l. |
| "                       | Public School.              | "                       | Public School.           |
| New Canaan, "           | "                           | Stonington, "           | Calvary Church School.   |
| "                       | Stephen Hoyt & Sons.        | St. Johnsbury, Vt.      | Horace Fairbanks.        |
| "                       | Francis Brown.              | Thomaston, Conn.        | Plymouth Woolen Co.      |
| New Haven, "            | High School.                | Unionville, "           | Public School.           |
| New London, "           | Mr. Crump's School.         | Vassalboro', Me.        | P. M. Jones.             |
| "                       | N. A. Lyon.                 | Wakefield, Mass.        | Town Hall.               |
| New Bedford, Mass.      | J. C. Robinson.             | Ware, "                 | Public School.           |
| Newport, R. I.          | Wm. P. Sheffield.           | Waterbury, Conn.        | A. S. Chase.             |
| Newtown, Conn.          | Newtown Academy Ass'n       | "                       | Baptist Church.          |
| Northboro', Mass.       | Public School.              | "                       | High School.             |
| "                       | R. W. Newton.               | "                       | Board of Education.      |
| North Brantford, Conn.  | Public School.              | Watertown, "            | Episcopal School.        |
| North Bridgewater, Mas. | Darius Howard.              | Webster, Mass.          | Public School.           |
| Northford, Conn.        | Public School.              | "                       | F. D. Brown.             |
| North Hadley, Mass.     | "                           | Westboro', "            | Dr. Hero's School.       |
| "                       | L. N. Granger.              | West Brookfield, Mass.  | Public School.           |
| North Middleboro', "    | H. L. Edwards.              | "                       | B. P. Aiken.             |
| Norwalk, Conn.          | Centre School District.     | West Cheshire, Conn.    | Amos Moss.               |
| "                       | North Centre School Dist.   | West Cornwall, "        | Public School No. 1.     |
| "                       | Over River School Dist.     | "                       | " " " " No. 2.           |
| "                       | North West " "              | Westford, Mass.         | "                        |
| "                       | Broad River " "             | West Meriden, Conn.     | State Reform School.     |
| "                       | Miss Beecher's School.      | West Needham, Mass.     | Mr. Clarke's School.     |
| "                       | Mr. Selleck's " "           | West Stockbridge, "     | S. Spencer, Jr.          |
| "                       | Edward Merrill.             | West Tisbury, "         | Public School.           |
| "                       | Charles Reynolds.           | "                       | M. C. Mitchell.          |
| Norwich, "              | Public School.              | West Thompson, Conn.    | Walter Bates.            |
| "                       | Central School District.    | Wethersfield, "         | R. A. Robbins.           |
| "                       | Preston " "                 | Wilton, "               | Public School.           |
| "                       | School Street Public Sch'l  | "                       | S. B. Fancher.           |
| "                       | Mrs. Platt's School.        | Winnepang, "            | Public School.           |
| "                       | N. S. Gilbert.              | Woonsocket, R. I.       | A. Sherman.              |
| Orange, Mass.           | Public School.              | Yalesville, Conn.       | School District No. 3.   |
| "                       | C. M. Barber.               | Yantic, "               | E. W. Williams.          |

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| Ashbury,           | N. J. | Mr. Smith's School.       | Freeman's Depot, N. J. | Public School.                           |
| "                  | "     | Public School.            | German Valley,         | "                                        |
| Barnegat,          | "     | "                         | Hamburg,               | School District No. 1.                   |
| Bayonne,           | "     | 1st Ward "                | Hoboken,               | Misses French's School.                  |
| "                  | "     | 2d "                      | "                      | Mrs. De Valeres "                        |
| "                  | "     | 3d "                      | "                      | Mrs. Dormitzer's "                       |
| "                  | "     | Board of Education.       | Hoboken,               | Public School.                           |
| Belvidere,         | "     | Public School.            | "                      | G. J. B. Keizer.                         |
| Bergen Point,      | "     | School No. 1.             | Holmdal,               | School District No. 1.                   |
| Bergen,            | "     | Bergen Institute.         | Honesdale, Penn.       | Honesdale Graded School.                 |
| Bloomsburg, Penn.  | "     | State Normal School.      | "                      | Select School.                           |
| "                  | "     | Mr. Craver's School.      | "                      | E. F. Torrey.                            |
| Boonton,           | N. J. | School District No. 7.    | "                      | W. W. Weston.                            |
| "                  | "     | Miss Crane's School.      | Hudson City, N. J.     | S. V. Bettings.                          |
| Branchport Stat'n  | "     | Public School.            | Hunt's Mills,          | School District No. 1.                   |
| Bricksburg,        | "     | School District No. 7.    | Irrington,             | Public School.                           |
| Brick Township,    | "     | " " " 3.                  | Jamesburg,             | State Reform School.                     |
| "                  | "     | " " " 5.                  | Jersey City,           | Mrs. Paxton's School.                    |
| Caldwell,          | "     | Public School.            | "                      | Miss Adams' School.                      |
| "                  | "     | Jonathan Prevost.         | "                      | Public School for Col-<br>ored children. |
| Cedar Grove,       | "     | Public School.            | "                      | Public School, No. 1.                    |
| Chaseford,         | "     | School District No. 1.    | "                      | " " " 1.                                 |
| Clifton,           | "     | Public School.            | "                      | " " " 12.                                |
| "                  | "     | S. Newell.                | "                      | " " " 4th Ward.                          |
| Clinton,           | "     | Public School.            | "                      | Board of Education.                      |
| "                  | "     | N. W. Voorhees.           | Keyport,               | Miss Brown's School.                     |
| Coytesville,       | "     | Linwood Institute.        | "                      | Public School.                           |
| Dayton,            | "     | J. V. Hubbard.            | "                      | Gordon and Herbert.                      |
| Deal,              | "     | Public School.            | Kingston, Penn.        | Wyoming Seminary.                        |
| Denville,          | "     | "                         | Knowlton, N. J.        | Public School.                           |
| "                  | "     | Geo. E. Righter.          | Lafayette,             | "                                        |
| Deer Park,         | "     | School District No. 8.    | Lebanon,               | "                                        |
| Dover,             | "     | Public School.            | Lock Haven, Penn.      | Miss Parson's School.                    |
| "                  | "     | School District No. 8.    | Long Branch, N. J.     | School District No. 1.                   |
| "                  | "     | Mine Hill District No. 2. | "                      | " " " 6.                                 |
| Easton, Penn.      | "     | Miss McCarrell's School.  | Madison,               | Miss Davy's School.                      |
| East Orange, N. J. | "     | Miss Grimes' School.      | "                      | Public School.                           |
| East Passaic,      | "     | School District No. 36.   | Manalpan,              | "                                        |
| Eatonton,          | "     | " " " 4.                  | Manchester,            | "                                        |
| Edinboro', Penn.   | "     | State Normal School.      | Marlboro',             | "                                        |
| Elizabeth, N. J.   | "     | School District No. 1.    | Meadville, Penn.       | Mr. Tingley's School.                    |
| "                  | "     | Elizabeth Orphan Asylum.  | Merchantville, N. J.   | Public School.                           |
| "                  | "     | Elizabeth Select School.  | Middlebush,            | J. Newton Voorhees.                      |
| "                  | "     | Public School.            | Milburn,               | St. Stephen's School.                    |
| Elizabethport,     | "     | D. J. Meeker.             | Millstone,             | Public School, No. 1.                    |
| Englewood,         | "     | Englewood Free School.    | "                      | Gravel Hill School.                      |
| "                  | "     | Public School.            | "                      | A. Olcott.                               |
| Englishtown,       | "     | "                         | Montclair,             | Montclair High School.                   |
| "                  | "     | Rev. J. L. Kehoo.         | "                      | Geo. H. Francis.                         |
| Erie, Penn.        | "     | Board of Education.       | Morristown,            | Public School.                           |
| Fair Haven, N. J.  | "     | Mrs. Harwood's School.    | Mountain View,         | School District No. 11.                  |
| Farmingdale,       | "     | Public School.            | Neahanic,              | Mechanic Institute.                      |
| "                  | "     | A. H. Patterson.          | Newark,                | 1st Ward Public School.                  |
| Flemington,        | "     | Rev. G. S. Mott's School. | "                      | 2d " " "                                 |
| "                  | "     | Rev. G. S. Woodhall's "   | "                      | 3d " " "                                 |
| Forked River,      | "     | Public School.            | "                      | 4th " " "                                |
| Fort Lee,          | "     | "                         | "                      | 5th " " "                                |
| "                  | "     | Father Smith.             | "                      | 6th " " "                                |
| Franklin Furnace   | "     | School District, No. 12.  | "                      | 8th " " "                                |
| Freehold,          | "     | Freehold Institute.       | "                      | 10th " " "                               |
| "                  | "     | Public School.            |                        |                                          |



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| Newark,                  | N. J. .... 11th Ward Public School. | Plainfield,                    | N. J. .... { Plainfield College for |
| "                        | " .... 19th " " "                   | "                              | " .... { Young Ladies.              |
| "                        | " .... 18th " " "                   | "                              | " .... { Public School, No. 1.      |
| "                        | " .... Mr. Shier's School.          | "                              | " .... { Young Men's Republi-       |
| "                        | " .... Miss Chase's "               | "                              | " .... { can Club.                  |
| "                        | " .... Mrs. Shafer's School.        | Plainsville, Penn. ....        | Public School.                      |
| "                        | " .... Miss Hulse's "               | Port Jervis, N. J. ....        | School District No. 1.              |
| "                        | " .... Mrs. Leland's "              | Rahway,                        | " .... Parochial School.            |
| "                        | " .... Mr. Masse's "                | "                              | " .... Rahway Seminary.             |
| "                        | " .... High School.                 | Red Bank,                      | " .... Public School.               |
| "                        | " .... Newark School Asso'n.        | "                              | " .... Rev. A. Perkins.             |
| "                        | " .... Rev. P. W. M. Walter.        | Reed's Station, Penn. ....     | Rev. J. T. Wampole.                 |
| New Branch,              | " .... Public School.               | Rocky Hill, N. J. ....         | Miss Pruyn's School.                |
| New Brunswick,           | " .... Board of Education.          | Rutherford Park, "             | " .... Presbyterian Chapel.         |
| "                        | " .... Rev. Father M. C. Duggan.    | "                              | " .... School District No. 2.       |
| "                        | " .... Theological Seminary.        | "                              | " .... T. M. Dickey.                |
| "                        | " .... Rutgers College.             | "                              | " .... S. Winslow.                  |
| "                        | " .... { Rutgers College Gram-      | Schooley's Mount'n, N. J. .... | Seminary.                           |
| "                        | " .... mar School.                  | Scranton, Penn. ....           | Public School.                      |
| "                        | " .... J. C. Edmonds.               | Secaucus, N. J. ....           | " "                                 |
| "                        | " .... Forman Martin.               | Somerville,                    | " .... " "                          |
| "                        | " .... Sixth Ward Public Sch'l.     | "                              | " .... Presbyterian Church.         |
| New Market,              | " .... School District No. 4.       | "                              | " .... Mr. Cornell's School.        |
| Orange,                  | " .... Board of Education.          | "                              | " .... Wagner, Potter & Lyman.      |
| "                        | " .... Dr. Lowell Mason.            | "                              | " .... W. P. Flowers.               |
| "                        | " .... German-English School.       | Southold,                      | " .... Public School.               |
| "                        | " .... Miss Grimes' "               | South River,                   | " .... " "                          |
| "                        | " .... Miss Robinson's "            | South Orange,                  | " .... Montrose Classical Ins.      |
| "                        | " .... { Misses Earl and Munn's     | South New Durham, N. J. ....   | School District No. 3.              |
| "                        | " .... School.                      | Spotswood, N. J. ....          | Mr. Willis' School.                 |
| "                        | " .... Rev. T. Atkinson.            | Spring Valley,                 | " .... Spring Valley Chapel.        |
| "                        | " .... W. A. Gellathly.             | Stanhope,                      | " .... School District No. 22.      |
| Pasadena,                | " .... Miss Sinclair's School.      | Stockholm,                     | " .... " " " 9.                     |
| Paterson,                | " .... Miss Jones' "                | Summit,                        | " .... St. John's School.           |
| "                        | " .... Mr. Harwood's School.        | Tenafly, /                     | " .... Mrs. Veysey's School.        |
| "                        | " .... Mr. Stevens' "               | Towanda, Penn. ....            | { Susquehanna Collegiate            |
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| "                        | " .... Paterson Seminary.           | Tunkhannock,                   | " .... Miss Tuttle's School.        |
| "                        | " .... Mrs. Renardson's School.     | West Chester,                  | " .... Mr. Wyers' "                 |
| "                        | " .... H. Waters.                   | West Hoboken, N. J. ....       | Public School.                      |
| Perth Amboy,             | " .... Public School.               | Westfield,                     | " .... School District No. 11.      |
| "                        | " .... Raritan Bay Seminary.        | West Orange,                   | " .... " " " 4.                     |
| Phillipsburg, Penn. .... | Steiner and Kelly.                  | Washington,                    | " .... " " " 2.                     |
| Piscataway, N. J. ....   | Public School.                      | Wilkesbarre, Penn. ....        | Plains District.                    |
| Pittston, Penn. ....     | Board of Education.                 | "                              | " .... Public School.               |
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| Bristol, Tenn. ....          | Female Institute.          | Faison's Depot, N. C. .... | Dr. H. W. Faison.        |

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|                             |                                      |                          |                                             |
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| Fernandina, Fla. ....       | Public School.                       | Shreveport, La. ....     | { Classical and Commercial Academy.         |
| " " .....                   | Bishop Young's Seminary              | " " .....                | George Williamson.                          |
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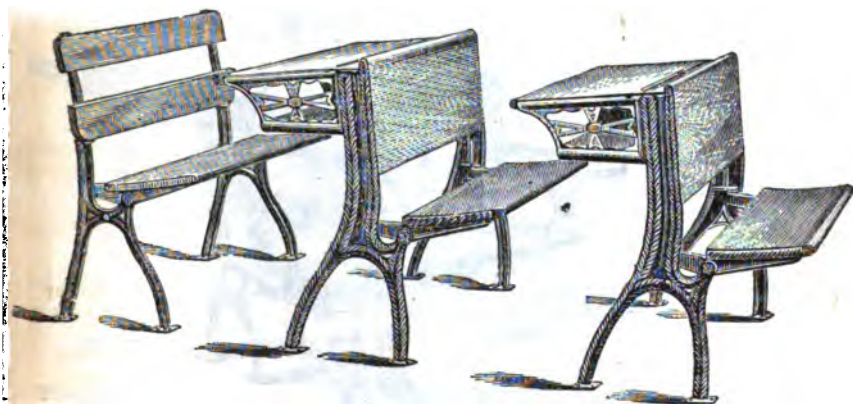
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The style illustrated in the cut is as easy and comfortable as it is possible to construct school furniture. The shape of the seat and back is precisely adapted to fit the natural outlines of the persons of pupils. This shape, together with the proper pitch of the seat, tends to compel an *erect* posture, which is sure to induce better health and habits than can be expected when uncomfortable furniture is used.

*Style A* is intended more especially for those in the children's and primary department, and for those in the intermediate department who have not yet attained to the "copy-book" degree. The arm, or "slate-rest," is sufficient for supporting the books and slates of the children, who can rest upon it when they lean forward. The book-boxes beneath the seat are ample for putting away books, slates, etc., when not in use.

This style is economical as to price and as to space required. It is constructed under the dove-tailed patent, hence is very substantial, and being easily taken apart ("knocked down"), may be cheaply shipped, and readily put together at its destination.

It is made of *three heights*—1, CHILDREN'S; 2, PRIMARY; and 3, INTERMEDIATE; in lengths of 3 ft., 4½ ft., 6 ft., 7½ ft., and 9 ft., with slate-rests for two, three, four, five, or six pupils respectively.

## SCHOOL FURNITURE.

### STYLES E & F.

## The New American School Desks and Settees.

(Munger's Patents, with Allen's Opera-Seat Patent.)



**E. Combined Desk and Settee.**

**F. Independent Desk and Settee.**

The exact physiological curvature of the seat and back has not been easy to find.—Much time was spent in gradual approaches to this curve. Different models were subjected to the criticism of teachers and school-children, and the still severer test of use. The faults of each form were carefully noted and corrected, until their various and often obscure defects were eliminated and the proper curve determined. That it was no easy task to discover the shape universally adapted to the persons of old and young—which would support the body just where it needs supporting, and leave it free at every other point—is well

attested by the almost universal failure of cabinet-makers and upholsterers to devise a chair, settee, car-seat, or church-pew that one can sit on half an hour without positive discomfort. The commonest faults (where a curve is attempted) are too great a curvature, or a misplaced one—a curve that strikes the back too high up, gouging the sitter under the shoulder-blades, or one bearing upon the shoulders like a yoke. Fig. x represents a seat, curiously contrived to miss the end intended. It is a copy of a portion of the engraved illustration of a certain "Sofa-backed" school seat. A more elaborate contrivance for forcing children to sit on the small of the back would be hard to find. Every one of the curves is just the reverse of what it should be. We have seen School Furniture



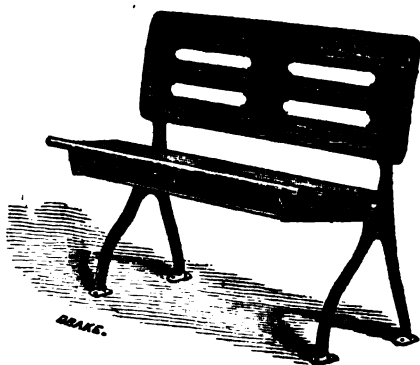
**Fig. x (Bad Form).**

with a boasted "curved back," having the edges of the back rudely "rounded off" a little, regardless of the natural outlines of the bodies of the pupils. That, however, is a farce which can hardly satisfy the enlightened wants of the educators of the present day.

The curves of the backs and seats of Styles E and F are faultless. [OVER]

## SCHOOL FURNITURE.

**The folding seat is the nicest adaptation** of Allen's Opera-seat patent yet conceived of. It is perfectly simple and noiseless. The lever works in a mortise,



**Independent Settee, with Book-Box.**

shipment, at about one-fifth of the usual freight charges on set-up furniture.

**Style E is the best Combined Desk and Settee made.** Its great width of base; the perfect balance of all its parts, rendering it steady even without the use of floor screws; and the rigid union of the wood and iron, make it so strong and firm that the chief, if not the only objection to **combined** desks and settees, liability to "joggle," is reduced to almost nothing.

**Style F** has been prepared for those who have insuperable objections to **combined** desks and settees. Such persons will recognize a special triumph in the **Independent Desks and Settees**. These will give the same appearance to the School Room as **Style E**. The Desks and Settees stand close together, are perfectly symmetrical, and yet are entirely distinct. No space is wasted, and no desk and settee touch each other.

In **Styles E and F** the space for books is ample on a shelf beneath the desk-top. In the double desks this shelf is divided in the middle by a partition. The ends of the desks are open-work to permit easy inspection by the teacher, and prevent the introduction of contraband articles.

These styles are considered complete to the minutest details. They are careful and artistic combinations of all the absolute requisites of perfect School Furniture. They are unrivalled in comfort, in strength and durability, in finished workmanship, and in graceful and elegant appearance.

Men of the best mechanical ideas and those who have given most study to modern School Furniture are the loudest in their praises.

**The Combined** has the following:—dimensions in "table of standard sizes:—"

- |                                                |   |
|------------------------------------------------|---|
| 21. Children's Desk and Settee—for two Pupils. | " |
| 22. Primary, " "                               | " |
| 23. Intermediate, " "                          | " |
| 24. Grammar, " "                               | " |
| 25. High School, " "                           | " |
| 26. Academic, " "                              | " |
| 27. Settees for Rear Rows, " "                 | " |
| 28. Ditto with Book-Box, " "                   | " |

- |                                          |   |
|------------------------------------------|---|
| 21½. Children's D. and S.—for one Pupil. | " |
| 22½. Primary, " "                        | " |
| 23½. Intermediate, " "                   | " |
| 24½. Grammar, " "                        | " |
| 25½. High School, " "                    | " |
| 26½. Academic, " "                       | " |
| 27½. Settees for Rear Rows, " "          | " |
| 28½. Ditto with Book-Box, " "            | " |

**The Independent:**

- |                                             |   |
|---------------------------------------------|---|
| 29. Primary Desk and Settee—for two Pupils. | " |
| 30. Intermediate, " "                       | " |
| 31. Grammar, " "                            | " |
| 32. High School, " "                        | " |
| 33. Academic, " "                           | " |
| 34. Settees for Rear Rows, " "              | " |
| 35. Ditto with Book-Box, " "                | " |

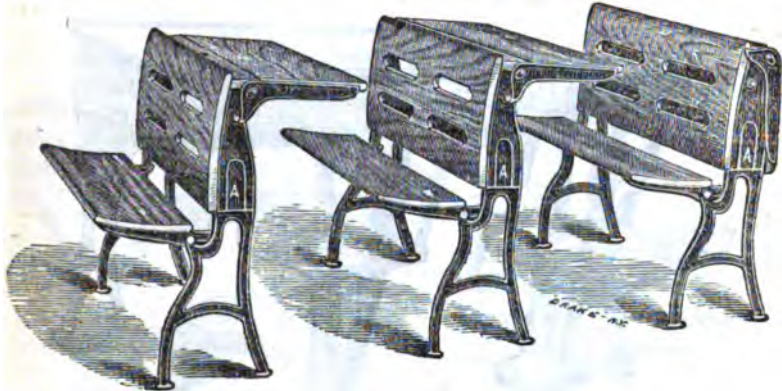
- |                                       |   |
|---------------------------------------|---|
| 29½. Primary D. and S.—for one Pupil. | " |
| 30½. Intermediate, " "                | " |
| 31½. Grammar, " "                     | " |
| 32½. High School, " "                 | " |
| 33½. Academic, " "                    | " |
| 34½. Settees for Rear Rows, " "       | " |
| 35½. Ditto with Book-Box, " "         | " |

## SCHOOL FURNITURE.

### STYLE G.

# Assembly-Room Desks and Settees.

(Munger's Patents with Allen's Opera-Seat Patent.)



It is often necessary that the School-room be used for a general Assembly-room—for Sunday-school, Public Lectures, and other purposes. Hence Furniture which will permit **the School-room to be readily transformed into an Assembly-room**, has long been desired. Inventors in this Country and in Great Britain have tried their skill; but with clumsy and expensive results. The achievement illustrated in the cuts is a decided success.

Economy of cost and space; strength and simplicity of construction; ease and rapidity of changing a School-room of Desks into an **Assembly-room of Settees**: all have been considered and accomplished. With this Furniture it is easy for the School-room to serve the double purpose of School and Public Hall.



The top is easily let down by the pupils, while seated in their places. The book-boxes are located as shown at A A A, extending the entire length of the Desks, giving ample book and slate room. When the Desks are folded the book-boxes are closed, keeping out the dust. Book-boxes may also be attached beneath the seats—as shown on Settees on another page. When desired they may be supplied with locks.

When Desk and Seat are both folded, less than one foot in width is occupied, leaving ample space for gymnastic exercises, passages, etc. (See Cut.)

The *folding Seat* (Allen's Opera-seat patent), with the *Comfortable Curves* of both back and seat, which have made the **New American School Desks and Settees** so widely famous, do good service in this style.

The **Assembly Desks and Settees** have five sizes, see table of standard sizes:

|                                             |                                           |
|---------------------------------------------|-------------------------------------------|
| 36. Primary Desk and Settee—for two Pupils. | 36½. Primary D. and Settee—for one Pupil. |
| 37. Intermediate, " "                       | 37½. Intermediate, " "                    |
| 38. Grammar, " "                            | 38½. Grammar, " "                         |
| 39. High School, " "                        | 39½. High School, " "                     |
| 40. Academic, " "                           | 40½. Academic, " "                        |
| 41. Settees for Rear Rows, " "              | 41½. Settees for Rear Rows, " "           |
| 42. Ditto with Book-box, " "                | 42½. Ditto with Book-box, " "             |



## SCHOOL FURNITURE.

### STYLE H.

## "Old Style" Desks and Chairs.



We are ready to supply the "Old Style" Desks and Chairs, though we do not care to recommend the uncomfortable and inconvenient chairs, and do not deny that distant customers will find the transportation expenses a very important item. Yet, many School Officers have long endured this style of Furniture, and many others may find no insuperable objections to it: and sometimes, for special reasons, may prefer it.



Circular Back Pedestal Chair.

The iron-work is strong and plain, having no points nor angles to tear the dress and catch the dust.

Besides the chairs which appear in the cut above, the "Circular Back Pedestal" chairs, and the "Extra School" chairs are appropriate for use with these desks. The three styles are about the same price.



Extra School Chair.

[Sometimes we have of this and similar styles *second-hand lots*, but little used, and "as good as new," which we can supply "at bargains." School Officers desiring to exchange them for modern styles, place them in storage for us to dispose of at "a sacrifice." We will not attempt to sell them to customers who cannot call and examine them for themselves.]

There are five sizes:

- 43. Primary Desk and Chairs—for two Pupils.
- 44. Intermediate, " "
- 45. Grammar, " "
- 46. High School, " "
- 47. Academic, " "

- 43½. Primary D. and Chair—for one Pupil.
- 44½. Intermediate, " "
- 45½. Grammar, " "
- 46½. High School, " "
- 47½. Academic, " "



## SCHOOL FURNITURE.

### STYLE I.

### Box Desks with Lids.



This style is an old favorite, yet in fair demand. It suits certain tastes, and meets the requirements of certain circumstances which other styles may not seem to satisfy.

We make these desks as handsomely as their construction will permit. The iron supports are substantial and plain—entirely without angles and points to tear the dress and afford lodgement for dust. They are fitted to screw fast to the floor, though they may be used without the floor-screws. They are well braced—(our artist has not clearly shown the braces in the cut).

The box part is well made of thoroughly seasoned wood. The lids have brass hinges, and close on rubber cushions to avoid noise.

The book-box beneath the lids is divided into two compartments in the double desks, each of which is supplied with a little shelf for pens, pencils, etc., and each lid has a brace for holding it when open. The top is properly inclined for writing. The level part of the top is grooved for pens and pencils, and is bored for inkwells.

The Lids are made plain, and finished in the usual manner, or they are covered with green enamelled cloth, as may be ordered.

Any chairs, movable, fixed, or folding, may be used with these desks. Chairs are sold separately.

There are five sizes—heights are given in table of standard sizes

|                                              |                                            |
|----------------------------------------------|--------------------------------------------|
| 48. Primary Box D. with Lids—for two Pupils. | 49. Primary B. D. with Lids—for one Pupil. |
| 49. Intermediate, " "                        | 49. Intermediate, " "                      |
| 50. Grammar, " "                             | 50. Grammar, " "                           |
| 51. High School, " "                         | 51. High School, " "                       |
| 52. Academic, " "                            | 52. Academic, " "                          |

## SCHOOL FURNITURE.

### STYLE I—(CONTINUED).

## Single Box Desks with Lids.



The cut represents the Box Desks with Lids adapted to one pupil. They are constructed precisely like those intended for two pupils, with same dimensions except as to length. Any kind of chairs may be used with these desks:—we have chairs to suit all tastes, and all purses.

Most educators appreciate the varied advantages of the folding chairs, and insist on having them. Of these there are two kinds—the new American folding chair and the Wilcox folding chair—both of which are made under the Allen Opera-Seat Patents.



New American Chair.

Five sizes of these desks and chairs, uniform with heights in table of standard sizes.



Wilcox Chair.

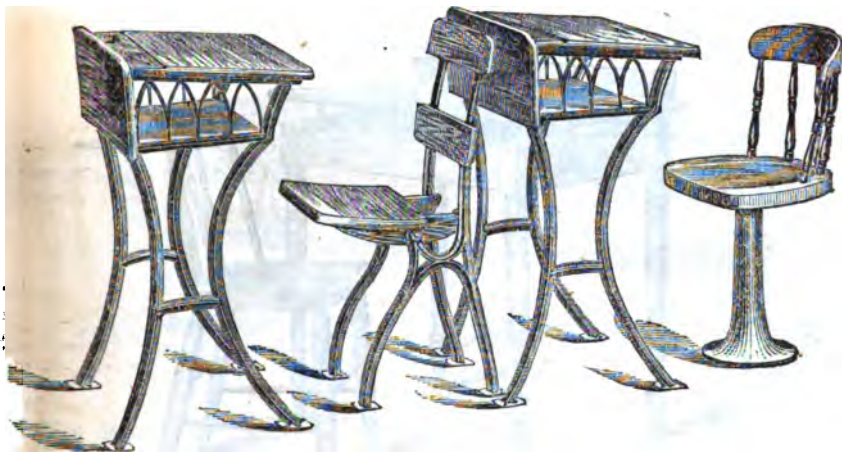
[Chairs appearing on these two pages (representing Box Desks with Lids) are named as follows—we enumerate them in the order in which they appear: (a) Circular Back, Cane seat; (b) Circular Back, Wood seat; (c) Extra School; (d) Curved Back, Cane seat; (e) New American Folding; (f) Wilcox Folding.]

53. Primary B. D. with Lid—for one Pupil.  
54. Intermediate, “ “  
55. Grammar, “ “

56. High School B. D. with Lid—for one Pupil.  
57. Academic, “ “

## SCHOOL FURNITURE.

### Single Desks, like Style D, with Chairs.



Economy of cost and space, and sometimes other considerations, induce school officers and teachers generally to purchase **double desks**, to accommodate two pupils. However, desks for single pupils are frequently called for. Hence, all of the desks shown in this catalogue are made **single**, for one pupil, as well as **double**, for two pupils.

It is not necessary to occupy our pages to show the several styles of single desks, since the views which we give of the double desks are sufficient to give correct impressions of the appearance of the desks when made for one pupil instead of two—the difference being in length only.

The above cut represents the single desk of Style D, shown on page 11.

Any style of chairs to suit the requirements of the case may be used. We have already illustrated several kinds of **movable, fixed, and folding chairs**—to which we would now refer. Sizes are uniform with Style D.

---

## STYLE J.

### Wall Desks.

Desks like that, shown in the accompanying cut are occasionally very convenient for placing around the walls of the school-room, or in spaces which may sometimes be required to be cleared for aisles. The top readily folds **down**, like the tops of the "**Assembly-Desks**," to make a free passage when required. The top, in folding down, incloses the book-box A. They are made to order in any required lengths.

There are five sizes :

- 58. Primary.
- 59. Intermediate.
- 60. Grammar.

- 61. High School.
- 62. Academic.





SCHOOL FURNITURE.

## Normal and Collegiate Desks.



**70. Turned Post, Box Desk,**

With lid and brace, enamelled cloth top. It is usually made of Black Walnut, but will be supplied in Ash or Cherry, when desired. It is specially desirable when the desks are required to be *movable*. The Chair shown is the **Extra School**.



**71. The New American Collegiate Desk**

Is a very superior desk, with a drawer, book-rack, etc. The Chair is the **New American Folding Chair**. Of course any chairs may be used with 70 and 71.

The four preceding desks, Nos. 68, 69, 70, and 71, are supplied double, for two pupils, as well as single, as shown in the cuts.

Besides the desks here enumerated, all of our many styles are made large enough to adapt them to **Normal and Collegiate** uses.

## SCHOOL FURNITURE.

# Lecture-Room Settees for Seminaries, Colleges, NORMAL SCHOOLS, AND UNIVERSITIES.



**72. The Cornell Lecture-Room Settee**

Was originally devised and constructed for Cornell University. Its use there has been highly approved by the president, faculty, students, and visitors. And it is in most satisfactory use in several of the first Colleges, Theological Seminaries, Normal Schools, and other prominent institutions.

The settee itself is the same as our New American Settee. To this is attached, at intervals to suit the circumstances of the case, desks, suitable for students' use in taking notes. These are strongly supported by ornamental cast-iron brackets, front and rear.

Settees are estimated by the foot at prices shown in our price list. When book-box is attached (as in cut) 20 cents per foot additional is charged. Writing desks (with brackets) for each student, \$1.00.

They are shipped *flat*, or "knocked down," making transportation expenses scarcely one-tenth of that on ordinary settees.

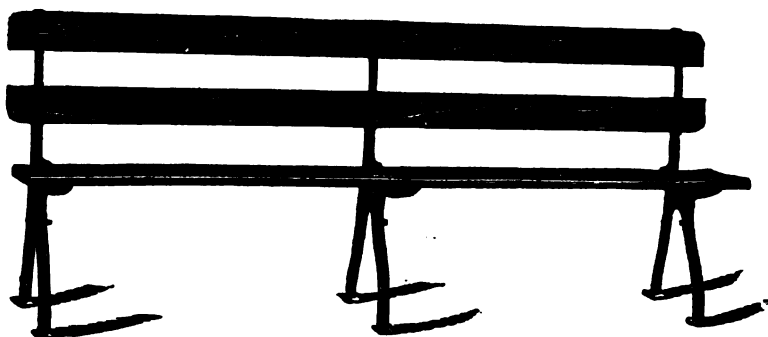


**73. The Cornell Examination Table**

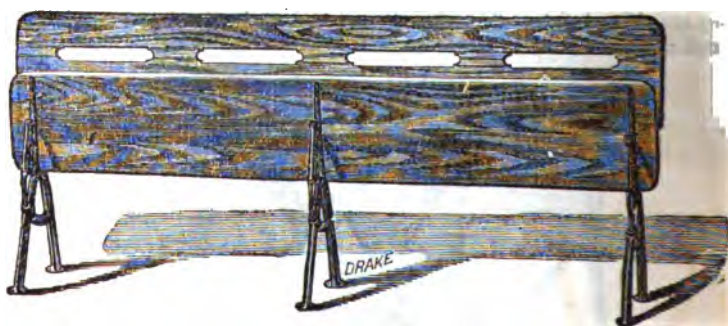
Was constructed at the suggestion of Hon. A. D. White, President of Cornell University. It contains no drawer for the concealment of papers, and folds flat for compact storage when not required for examination purposes. A hundred may be put away in a moderate size closet.

SCHOOL FURNITURE.

**Settees for Recitation Rooms, Sunday Schools,  
PUBLIC HALLS, &c.**



97. The Wilcox Settee has a Folding Seat, (under Allen's Opera-seat patent), curved slat back and iron supports. It is a cheaper form of the **New American Settee** described in another place. It has the same general advantages as the New American, and can be shipped—"Knocked down"—just as safely, and cheaply.



**New American Settee—Seat folded up.**

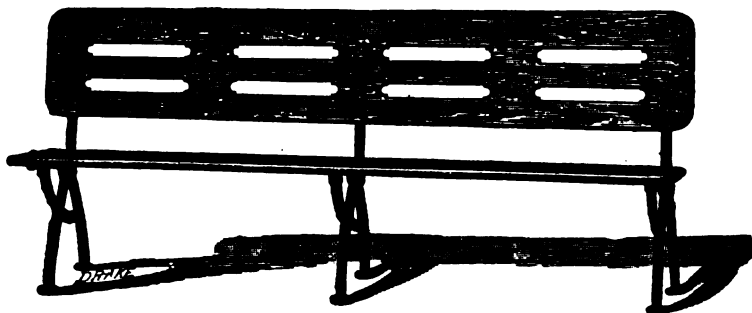
The Wilcox Settee folds just as compactly as the New American shown in the cut, giving ample space for standing, or for passages, sweeping, etc.

And again, if the hall is to be cleared of settees for any special purposes, these settees may be most compactly stored, each settee requiring only two inches of space in width.

The Wilcox Settee, and the New American Settee are graded to suit children and adults of all sizes. The regular lengths of these settees are 6 feet, 7 feet, 8 feet, 9 feet, and 10 feet. All other lengths made to order.

SCHOOL FURNITURE.

Settees for Recitation Rooms, Sunday Schools,  
PUBLIC HALLS, &c.



98. The New American Settee has a curved fancy slat back, and a curved seat—the curve being the same as that which has made the New American School Desks and Settees so widely famous for their comfort. The wood and iron are dove-tailed together under Mr. Munger's patents—the advantages of which are obvious. **The seat is folding, under Allen's Opera-seat patent.**

The several peculiar advantages of this settee make it without an equal, and greatly superior for many purposes.



The lever device for folding, as now constructed, is more clearly shown in the accompanying enlarged cuts. The lever is pivoted on a strong bolt, and works noiselessly in a mortise, inaccessible to the fingers or dress: and whether the seat is up or down it rests on rubber cushions.

**SCHOOL FURNITURE.**

**New American Settee for Primary Schools,**

**ALSO SETTEE WITH FOLDING ARMS.**



**99. New American Settee, Primary, Folding Seat, Book-Box.**

For primary schools these frequently supply a convenient, comfortable, and economical purpose. Sometimes a book-rack is attached to the back of the settee.

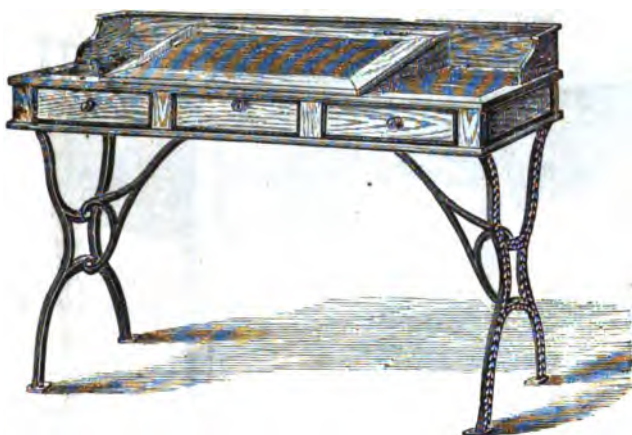


**100. New American Settee, Folding Seat, and Folding Arms.**

This style was constructed at the suggestion of William Ballantyne, Esq., of Washington, D. C. It has peculiar advantages for those who want a **Folding Settee with Arms** which readily fold with the Seat.



## TEACHERS' DESKS.



**6. The Guilford Desk.**

(Size, 24 in. by 45 inches.)

This is a very convenient and graceful desk, with fair capacity. It contains two drawers and a book-box. It has all the necessary qualities of a good desk, and can be recommended for the purpose to which it is adapted. Its iron supports can be readily taken off for safe and cheap shipment.

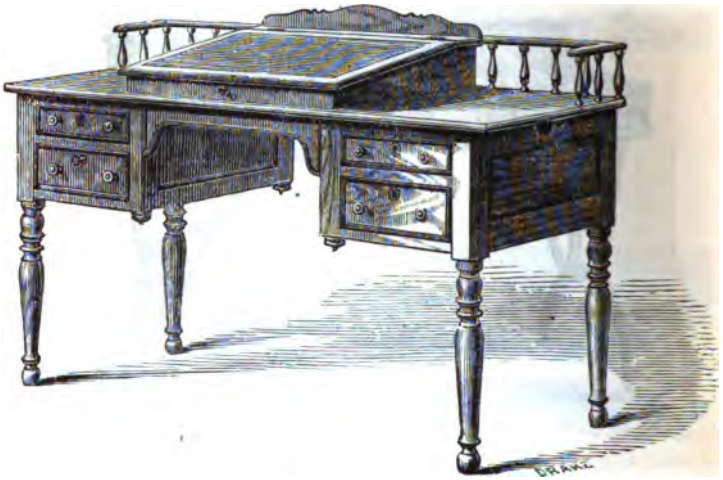


**7. The Todd Desk. Two Drawers and Book-box.**

(Size, 24 in. by 45 inches.)

This desk has two drawers and a book-box of unusual capacity beneath the lid. Besides the two drawers and pigeon-holes shown in the cut, the book-box is divided into small compartments under the level part of the top, for putting away papers, etc. It is an excellent desk for school purposes, and has had large demand.

## TEACHERS' DESKS.



### 8. The Model Desk. Four Drawers and Book-Box.

(Size, 24 in. by 52 inches.)

This is a handsome desk. It is made of ash, trimmed with black walnut, finished in panels, front, rear, and ends, having a remarkably graceful and lively appearance. It has four drawers, wide book-box beneath the lid, with ample space for books and papers on both sides of the writing surface.



### 9. The New Model Desk.

It has the size and capacity, with the general appearance, of No. 8, though plainer and stronger. For this reason it will generally be preferred.

### 10. The New Model Desk, made of Black Walnut.

## TEACHERS' DESKS.



### 11. Teacher's Desk, with Flat Top, Eight Drawers.

(Size, 24 in. by 53 inches.)

This is an elaborately finished desk, intended for the principal's platform, the side to the school being inclosed. It is made of beautiful grained ash, trimmed with black walnut, and panelled in front and at the ends with fine black walnut trimmings. It has eight drawers, of varied sizes, while the flat top gives ample space for papers, etc. Enamelled cloth covers the top.

### 12. The Same, made of Black Walnut, Billiard Cloth Top.



### 13. The Brewer Desk.

(Size, 24 in. by 60 inches.)

This desk can be shipped in three sections. It seems complete in all the essential requisites of a first-class principal's desk. It is made of ash, tastefully panelled and trimmed with fine black walnut mouldings.

### 14. The Same, made of Black Walnut.

## TEACHERS' DESKS.



### 15. Tremont Principal's Platform Desk.

(Size, 36 in. by 108 inches.)

This is an elaborate and elegant desk, of very great capacity. Its size is about three feet wide by nine feet long. The front contains closets for storing the books of the pupils, thus supplying the place of book-cases for an entire school. The doors of these closets are so nicely arranged that when closed they will not be observed.

It was originally designed and constructed for the schools of Tremont, N. Y., credit being due to Mr. William Herring, of the School Board, and Mr. George H. Albro, Principal of School No. 1.

It is made of finely grained ash, panelled and trimmed with black walnut.

The bright color and beautiful grain of the ash, which is used in constructing most of our teachers' desks, show to extra advantage in this desk. It is finished, as usual with all our work, in shellac, and grows brighter and harder with age. No person of good taste will be likely to select for school furniture such woods as grow dark and sombre.



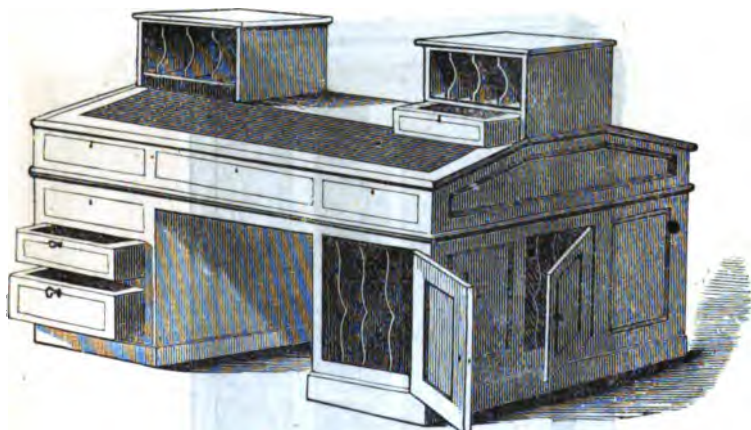
Rear view of No. 15.

Besides the ten drawers and the middle place for records, which show in the cut, there are two large book-boxes under the lids. For the purposes intended we think this desk has no equal. Its appearance would be creditable to any first-class school-room, and would harmonize with the best modern ideas of school furniture.

### 16. The Same, made of Black Walnut or Mahogany.



## SCHOOL OFFICERS' DESKS, ETC.



**17. Desk for "State Department of Instruction," Office of Board of Education, or Trustees' Room.**

**18. Same, of Black Walnut, Billiard Cloth Top.**

This extensive desk is required in cities and in large towns. It is built for occupation on both sides. It has many compartments and drawers to accommodate vast business, with ample places for putting away records and account-books, and filing many papers. It is constructed in five parts, for convenience in shipping and in setting up. Being made to order, its size will be varied to suit the demand.



**19. "Commissioner's" Desk, Carved Black Walnut, Enamelled Cloth Top.**  
(Size, 23 in. by 25 inches.)

**20. Same. Carved Black Walnut, French Polished, Cloth Top, with Gilt Border.**

This desk is an improvement on a desk which has been greatly admired. It is a beautiful and convenient article of office or household furniture. It has a capacious box under the lid for books and papers, and a closet on each side, with shelves, etc. It is panelled on all sides.

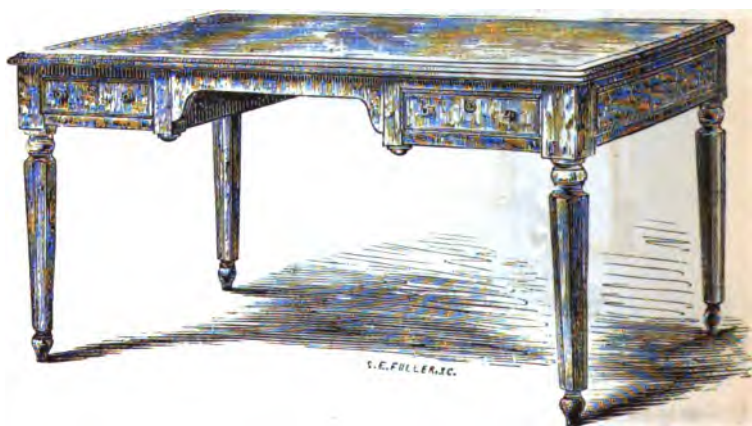
## LIBRARY CASES. TABLES, ETC.



**21. The Class-room Library Case.**

Size, four feet high above the brackets, three feet four inches wide, with movable shelves for books. Panelled doors.

Other sizes and styles made to order, at reasonable prices.



**22. The Library Table.**

Size, three feet by five feet. Four drawers. Made of selected ash, black walnut trimmings, octagon legs.

**23. Same, made of Black Walnut, Billiard Cloth Top.**

Other sizes and styles made to order.

## TEACHERS' TABLES.



**24. Teacher's Table. Plain Top, no Drawer.**  
(Size, 20 in. by 28 inches.)

**25. Teacher's Table. Plain Top, One Drawer**  
(Size, 24 in. by 36 inches.)

**26. Teacher's Table. Enamelled Cloth Top, One Drawer, with Lock and Key (like Out).**  
(Size, 24 in. by 36 inches.)

**27. Same, in Black Walnut, Enamelled Cloth Top, with Gilt Border.**



**28. Teacher's Table. Plain Top, Two Drawers, with good Locks and Keys**  
(Size, 24 in. by 42 inches.)

**29. Teacher's Table. Cloth Top, Two Drawers, with Locks and Keys (like Out).**  
(Size, 24 in. by 42 inches.),

**30. Teacher's Table. Cloth Top, Two Drawers, Black Walnut.**  
(Size, 26 in. by 36 inches.)

Any size or style to order, at proportionate prices.

## SCHOOL FURNITURE.

### Home Desks for Children and Adults.



31



32

31. A neat Home Desk for Children, black walnut, with Lock and Key.

32. Ditto, larger, size between 31 and 33 which the cuts illustrate.

33. For Young Ladies—large, with interior Compartments.



34



35

34. Is a pretty and convenient desk, with large drawer in lower part. The upper contains two little drawers, and several compartments for books, writing materials. The top has two shelves for books, ornaments, etc. The lid is hinged, and closes up like 35.

35. Is larger and more elaborate, having in addition a closet underneath, with paneled doors. Both these desks are ornamental as well as useful, and are highly appreciated by ladies.





*Object of which is to Teach the People all that pertains to Life, Health, the Prevention of Diseases, and right Remedies.*

HEALTH is the great want of the age. It is the first need of the individual, the family, the nation and the race. Health is happiness, Disease is misery; Health is long life; Disease is premature death; Health develops body, mind, and soul; Disease dwarfs and paralyzes all. Sickness and infirmity are the rule, and health the exception. It should be the reverse, and we should be just so soon as the masses of the people study the subject for themselves. It is easier to keep well than to get sick. All that is required is a knowledge of the *uses* or *misuses* of the various agencies and influences with which we are vitally related. To educate the people in the Science of Life, which includes all that relates to PRESERVING HEALTH, and to THE ART OF TREATING DISEASE WITHOUT MEDICINE, is the whole object and purpose of this new Health Journal.

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The

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*A Magazine of*

Popular Instruction and Literature.

August, 1872.

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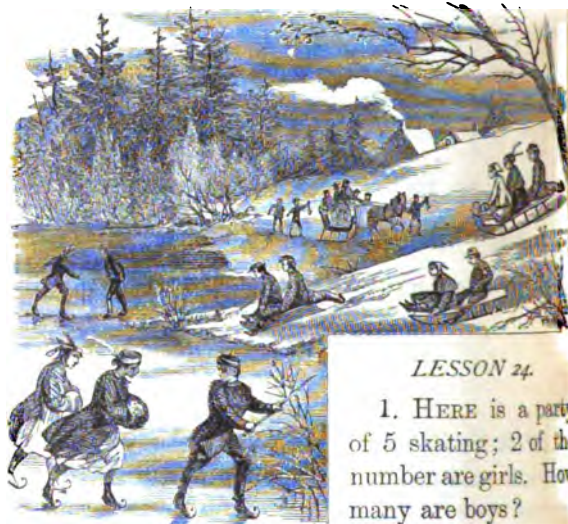
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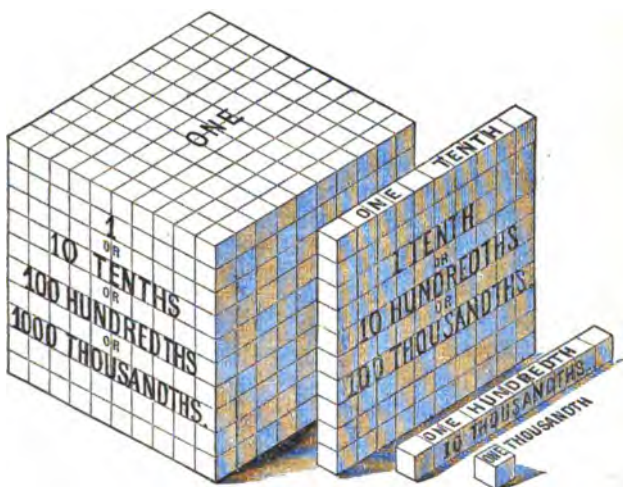
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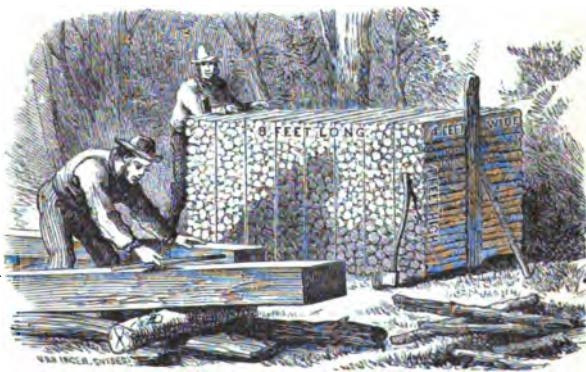
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# AMERICAN EDUCATIONAL MONTHLY.

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AUGUST, 1872.

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## *CARDINAL MEZZOFANTI.*

SKETCH OF A MAN WHO SPOKE FIFTY-SIX LANGUAGES.

**G**IUSEPPE GASPARDO MEZZOFANTI was the son of an humble carpenter, and was born at Bologna, September 17, 1774. He was sent to one of the charity schools of his native city, and was destined by his father to follow his own trade, at which it is said that he actually worked in his early boyhood. According to one account, which, although not contained in any of the published memoirs, is derived from a distinguished Anglican dignitary, once a pupil of Mezzofanti, it was while he was thus employed that he attracted the notice of the good old Oratorian, Father Respighi, to whom he was indebted for his release from the uncongenial lot for which his father had designed him.

The place of his work-bench was—as is usual in Italy—in the open air, and under the window of an old clergyman, who privately instructed a number of pupils in Greek and Latin. Young Mezzofanti, overhearing the lessons, caught up the instruction with that marvellous facility which distinguished his after life; and one day surprised his unconscious teacher with the discovery, that, without even having seen a Greek book, and without knowing a single letter of the alphabet, he had acquired an extensive and very accurate knowledge of the great body of the words contained in

the books which he had heard explained in these stolen lectures !

Respighi, who was a most kind-hearted and enlightened man, at once resolved to save for literature a youth of such promise, himself undertook the task of instructing him in Greek and Latin ; and on his declaring his preference for the ecclesiastical profession, placed him at the Episcopal seminary of Bologna. The meagre notices of his early career, which have been preserved, contain hardly anything of interest for our present purpose. He learned in college Latin, Greek, Hebrew, and Arabic. His first lessons in German were derived from a Bolognese ecclesiastic, the abbate Thiuli.

He picked up French from an old priest of Blois ; Swedish, from a Swedish physician who had settled at Bologna ; and Coptic from a learned clergyman, the Canonico Mingarelli. And it is plain from what is told of him that then, as later, the faculty of memory was that through which he mainly worked in the acquirement of his linguistic stores. One of his recorded schoolboy feats was to repeat, after a single reading, a folio page of St. John Chrysostome, which he had never before seen ; and other exercises of memory, equally ready and equally remarkable, are mentioned among the recollections of his youth.

He was admitted to priest's orders in 1797, and in the end of that year was appointed professor of Arabic in the University. In the following year, however, he was deprived, on refusing to take the oaths required by the new Cisalpine Republic ; and, until the year 1804, when he was again restored, he eked out a scanty income by private tuition, especially in the Marescalchi family, where he had the advantage of an extensive and curious library, particularly rich in the department of languages. His fidelity to the papal cause, in the contests between Pius VII and Napoleon, led to his being a second time deprived of his professorship, in 1808, though he was invited by the Emperor to Paris, with most brilliant prospects ; but in 1812 he obtained the place of assistant librarian ; and on the return of Pius VII from his exile, in 1814, his fidelity, as well as his other distinguished merits, received a more fitting reward, in the

appointment of principal librarian and regent of studies in the university.

To the duties of these offices he devoted himself assiduously, and he refused every solicitation by which it was sought to withdraw him from his native city. Murat endeavored to lure him to Naples; the Grand Duke of Tuscany invited him to Florence; the Emperor Francis held out tempting offers in Vienna; Pius VII employed every instance to obtain his services in Rome. But he was proof against them all, and continued, with the exception of a few brief excursions to Modena, to Mantau, to Leghorn, Pisa, and Rome, to reside in Bologna, until the accession of Gregory XVI in 1831.

It was during these years that he acquired the largest proportion of his knowledge of languages. Very few particulars of the marvelous history are preserved, beyond the names of a few individuals, (none of them possessing any particular interest,) from whom he is said to have received information or instruction in some of the many languages which he contrived to master. His position was not so unfavorable for these studies as might at first sight be supposed. In those days Bologna was the high road to Rome, and few visitors to that capital failed to tarry for a short time at Bologna, to examine the many objects of interest which it contains. To all these Mezzofanti found a ready and welcome access. There were few with whom his fertile vocabulary did not supply some medium of communication; but, even when the stranger could not speak any except the unknown tongue, Mezzofanti's ready ingenuity soon enabled him to establish a system for the interchange of thought. A very small number of leading words sufficed as a foundation; and the almost instinctive faculty with which, by single effort, he grasped all the principal peculiarities of the structure of each new language, speedily enabled him to acquire enough of the essential inflections of each to enter on the preliminaries of conversation. For his marvellous instinct of acquisitiveness this was enough. The iron tenacity of his memory never let go a word, a phrase, an idiom, or even a sound, which it once had mastered.

The circumstance, however, which, more than any other,

tended to procure for him opportunity of extending his knowledge of languages, was the frequent passing and re-passing of troops through the north of Italy, during those years of war and revolution. French and Austrian armies alternately occupied the legations. Russian troops, too, not unfrequently, were to be seen in Bologna. And it need scarcely be said that the armies of Austria and Russia comprise in their motley ranks a larger proportion of languages than those of all the rest of Europe beside. Thus the military hospitals of Bologna, which were seldom untenanted during the last years of the eighteenth and the beginning of the present century, furnished an admirable field for the polyglot studies which had become the passion of Mezzofanti's life. He was at all times most assiduous in his attendance upon the sick; and his priestly ministrations, both within and without the hospitals, afforded him ample opportunities of increasing his store. He was soon marked out as the "foreigner's confessor" (*confessario dei forestieri*) of Bologna; an office which, in Rome and other Roman Catholic cities, is generally entrusted to a staff consisting of many individuals.

Almost every foreigner was sure to find a ready resource in Mezzofanti; though it more than once happened that, as a preliminary step towards receiving the confession of the party applying for this office of his ministry, he had to place himself as a pupil in the hands of the intending penitent, and to inquire from him or her the rudiments of the language in which they were to communicate with each other. The process to him was simple enough. If the stranger was able to repeat for him the Commandments, the Lord's Prayer, the Apostles' Creed, or any one of those familiar prayers which are the common property of all Christian countries, or even to supply the names of a few of the leading ideas of the Christian theology, as God, sin, virtue, earth, heaven, hell, etc., it was sufficient for Mezzofanti. In many cases he proceeded to build upon a foundation not a whit more substantial. The services which he thus rendered to the foreign soldiery in the hospitals, earned for him the grateful notice of their officers; and it is said that a lasting friendship with the Russian General Suwarrow origi-

nated in this way, during one of that rude soldier's campaigns in Italy.

His own account of the process by which these various stores were successively gathered, and which is given by the author of a French memoir named at the head of these pages, is very simple and interesting. Mezzofanti, though most liberal and tolerant to all others, was zealously devoted to the duties of his own profession. "I was living at Bologna," he said, "during the war. At that time I was young in the ministry, and used to visit the military hospitals. I met there among the patients, Hungarians, Slaves, Germans, Bohemians, etc., whom, although dangerously ill or wounded, I was unable to confess or to reconcile with the Church. My heart was grieved at the sight. I gave myself up to the study of these languages, and easily acquired enough to make myself intelligible. I needed no more. I began to make my rounds among the sick beds. Some I managed to confess; I talked with others; so that in a short time I had considerably enlarged my vocabulary. With the blessing of God, assisted by my own memory and industry, I came to know not only the language of the countries to which these invalids belonged, but even the dialects of the different provinces."

"The hotel-keepers, too," he added, "were in the habit of apprising me of the arrival of all strangers at Bologna. I made no difficulty, when anything was to be learned, about calling on them, interrogating them, making notes of their communications, and taking instructions from them in the pronunciation of their respective languages. A few learned Jesuits, and several Spaniards, Portuguese, and Mexicans, who resided at Bologna, afforded me valuable aid in learning both the ancient languages and those of their own countries. I made it a rule to learn every new grammar, and to apply myself to every strange dictionary that came within my reach. I was constantly filling my head with new words; and, whenever any new strangers, whether of high or low degree, passed through Bologna, I endeavored to turn them to account, using the one for the purpose of perfecting my pronunciation, and the other for that of learning the familiar words and turns of expression. I must confess, too,

that it cost me but little trouble; for, in addition to an excellent memory, God had blessed me with an incredible flexibility of the organs of speech."<sup>1</sup>

By degrees, as his fame extended, travelers from the most distant countries, and speaking the most out-of-the-way tongues, began to visit Bologna, with the express purpose of seeing Mezzofanti. The troubles in Greece and among the Christian populations subject to the Porte, during and before the outbreak of the war of independence, brought many refugee ecclesiastics to Italy. The various revolutions of Spain led to more than one Catalonian and Valencian priest taking up his residence in Bologna. All these and many more were placed under contribution. And it is about this period of Mezzofanti's career that the interesting series of notices, compiled by Mr. Watts,<sup>2</sup> may be said to commence.

The earliest account of Mezzofanti, which Mr. Watts has found, reaches no further back than November, 1817. It was published in 1819, in Mr. Stewart Rose's "Letters from the North of Italy."

"As this country," he writes, "has been fertile in every variety of genius, from that which handles the pencil to that which sweeps the skies with the telescope; so even in this, her least favorite beat, she has produced men who, in early life, have embraced such a circle of languages as one should hardly imagine their ages would have enabled them to attain. Thus the wonders which are related to one of these, Pico di Mirandola, I always considered fabulous, till I was myself the witness of acquisitions which can scarcely be considered less extraordinary.

"The living lion to whom I allude is Signor Mezzofanti, of Bologna, who, when I saw him, though he was only thirty-six years old, read twenty and wrote eighteen languages. This is the least marvellous part of the story. He spoke all these fluently, and those of which I could judge with the most extraordinary precision. I had the pleasure of dining with him formerly in the house of a Bolognese lady, at

<sup>1</sup> Esquisse Histor. sur le Card. Mezzofanti. Par A. Manavit, p. 104-5.

<sup>2</sup> On the Extraordinary Powers of Cardinal Mezzofanti as a Linguist, by Thomas Watts, Esq. Vol V., p. iii.

whose table a German officer declared he could not have distinguished him from a German. He passed the whole of the next day with G—— and myself, and G—— told me he should have taken him for an Englishman, who had been some time out of England. A Smyrniote servant who was with me, bore equal testimony to his skill in other languages, and declared he might pass for a Greek or a Turk in the dominions of the Grand Seignior. But what most surprised me was his accuracy; for, during long and repeated conversations in English, he never once misapplied the *sign* of a tense, that fearful stumbling-block to Scotch and Irish, in whose writings there is always to be found some abuse of these undefinable niceties. The marvel was, if possible, rendered more marvellous by this gentleman's accomplishments and information—things rare in linguists, who generally mistake the means for the end. It ought also to be stated that his various acquisitions had all been made in Bologna, from which, when I saw him, he had never wandered above thirty miles."—[*Letters from the North of Italy*, ii. 54.

It can hardly be necessary to record the testimony of Lord Byron, which has become almost a proverb. There is no certainty as to the date at which this visit, so characteristically described, took place, as it is merely alluded to casually in a letter written to a friend, as one of the memorable events of the writer's life. But we are inclined to think that it must have been early in the noble poet's residence in Italy, and before he had attained much familiarity with Italian. The spelling [Mezzophanti] of Mezzofanti's name, is a solecism against one of the fundamental laws of Italian orthography, into which we could hardly suppose that any one long resident in Italy to have fallen. Probably Byron's visit was not far removed from that of Stewart Rose.

"I don't remember a man amongst them," he says, of foreign literary men generally, "whom I ever wished to see twice, except, perhaps, Mezzophanti, who is a monster of languages, the Briareus of parts of speech, a walking polyglot, and more, who ought to have existed at the time of the tower of Babel, as universal interpreter. He is, indeed, a marvel, unassuming also. I tried him in all the tongues in which I knew a single oath or adjuration to the gods,

against post-boys, savages, Tartars, boatmen, sailors, pirates, gondoliers, muleteers, camel-drivers, vetturini, postmasters, post-houses, post, everything ; and egad, he astonished me—even to my English !”

A year or two later we have an account from what might naturally be presumed to be the severer pen of the celebrated mathematician and astronomer, Baron Von Zach, who saw Mezzofanti during a visit which he made to Bologna, for the purpose of observing the annular eclipse of the sun. In the issue of his scientific Journal “Correspondance Astronomique” for February, 1820, he writes :

“The annular eclipse of the sun was one great curiosity for us, and Signor Mezzofanti was another. This extraordinary man is really a rival of Mithridates ; he speaks thirty-two languages, living and dead, in the manner I am going to describe. He accosted me in Hungarian, and with a compliment so well turned, and in such excellent Magyar, that I was quite taken by surprise and stupified. He afterwards spoke to me in German, at first in good Saxon (the *Crusca* of the Germans,) and then in the Austrian and Swabian dialects, with a correctness of accent that amazed me to the last degree, and made me burst into a fit of laughter at the contrast between the language and the appearance of this astonishing professor. He spoke English to Captain Smyth, Russian and Polish to Prince Volkonski, not stuttering and stammering, but with the same volubility as if he had been speaking his mother tongue, the dialect of Bologna. I was quite unable to tear myself away from him. At a dinner at the cardinal legate’s, Della Spina, his eminence placed me at table next him ;—after having chatted with him in several languages—all of which he spoke much better than I did—it came into my head to address him on a sudden some words of Wallachian. Without hesitation, and without appearing to remark what an out-of-the-way dialect I had branched off to, off went my polyglot in the same language, and so fast, that I was obliged to say to him : ‘Gently, gently, Mr. Abbé ; I really can’t follow you ; I am at the end of my Latin-Wallachian.’ It was more than forty years since I had spoken the language, or even thought of it, though I knew it very well in my youth, when



I served in an Hungarian regiment, and was in garrison in Transylvania. The professor was not only more ready in the language than I, but he informed me on this occasion that he knew another tongue that I had never been able to get hold of, though I had enjoyed better opportunities of doing so than he, as I formerly had men that spoke it in my regiment.

"This was the language of the Zigans, or Gipsies, whom the French so improperly call Bohemians, at which the good and genuine Bohemians, that is to say, the inhabitants of the kingdom of Bohemia, are not a little indignant. But how could an Italian Abbe, who had never been out of his native town, find means to learn a language that is neither written or printed? In the Italian wars an Hungarian regiment was in garrison at Bologna: the language-loving professor discovered a gipsy in it, and made him his teacher, and with the facility and happy memory that nature has gifted him with, he was soon master of the language, which, it is believed, is nothing but a dialect, and a corrupted one into the bargain, of some tribes of Parias in Hindostan."—(*Zach: Correspondance Astronomique*, vol. iv. pp. 191–2.)

These marvellous details were received with considerable incredulity by some, and were explained away by others as the embellishments of a traveler's tale. Accordingly, the Baron, in a subsequent number of his journal, reiterates the statement, and enters into fuller explanations regarding it. Alluding to the similar doubts which are expressed by some critics as to the truth of the almost equally marvellous statements made by Valerius Maximus; that "Cyrus knew by name every soldier in his army;" and that "Mithridates was master of the languages of the twenty-two nations which were subject to him," the Baron proceeds:

"It may be so; we know nothing about it, and in consequence we will not contradict these critics; but what we know is, that Signor Mezzofanti speaks very good German, Hungarian, Slavonic, Wallachian, Russian, Polish, French and English. I have mentioned my authorities. It has been said that Prince Volkonski and Captain Smyth gave their testimony in favor of this wonderful professor, out of politeness only. But I asked the prince alone, how the pro-

fessor spoke Russian, and he told me he should be very glad if his own son spoke it as well. The child spoke English and French better than Russian, having always been in foreign countries with his father. The captain said: 'The professor speaks English better than I do; we sailors knock the language to pieces on board our vessels, where we have Scotch and Irish, and foreigners of all sorts; there is often an odd sort of jargon spoken in a ship; the professor speaks with correctness, and even with elegance; it is easy to see that he has studied the language.'

"M. Mezzofanti came one day to see me at the hotel where I was staying; I happened not to be in my own rooms, but on a visit to another traveler who lodged in the same hotel, Baron Ulmenstein, a colonel in the King of Hanover's service, who was traveling with his lady. M. Mezzofanti was brought to me; and, as I was the only person who knew him, I introduced him to the company as a professor and librarian of the University. He took part in the conversation, which was carried on in German; and, after this had gone on for a considerable time, the baroness took an opportunity of asking me aside, how it came to pass that a German was a professor and librarian in an Italian University. I replied that M. Mezzofanti was no German, that he was a very good Italian of the city of Bologna, and had never been out of it. Judge of the astonishment of all the company, and of the explanations that followed! My readers, I am sure, will not think the testimony of Baroness Ulmenstein to be suspected. The baroness is a thorough German, of a cultivated mind, and herself speaks four languages in great perfection."

The year 1820 is very fertile in such notices. We have another from a Danish writer, M. Molbech, one of the librarians of Copenhagen; M. Molbech's testimony to Mezzofanti's general attainments is equally honorable with that which he bears to his mastery of languages.

"At last, in the afternoon, I succeeded in meeting one of the living wonders of Italy, the librarian Mezzofanti, whom I had only spoken with for a few moments in the gallery, when I passed through Bologna before; I now spent a couple of hours with him, at his lodgings in the university

building, and at the library, and would willingly, for his sake alone, have prolonged my stay at Bologna for a couple of days, if I had not been bound by contract with the vetturino as far as Venice. His celebrity must be an inconvenience to him ; for scarcely any educated traveler leaves Bologna without having paid him a visit, and the hired guides never omit to mention his name among the first curiosities of the town. This learned Italian, who has never been so far from his birth-place, Bologna, as to Florence or Rome, is certainly one of the world's greatest geniuses in point of languages. I do not know the number he understands, but there is scarcely an European dialect, whether Romanic, Scandinavian, or Sclavonic, that this miraculous polyglotist does not speak. It is said the total amount to more than thirty languages ; and among them is that of the Gipsies, which he learned to speak from a gipsy who was quartered with an Hungarian regiment at Bologna.

“ I found a German with him, with whom he was conversing in fluent and well-sounding German ; when we were alone, and I began to speak to him in the same language, he interrupted me with a question in Danish, ‘ *Hvorledes har det behaget dem i Italien ?* ’ (‘ How have you been pleased with Italy ? ’ ) After this he pursued the conversation in Danish, by his own desire, almost all the time I continued with him, as this, according to his own polite expression, was a pleasure he did not often enjoy ; and he spoke the language, from want of exercise, certainly not with the same fluency and ease as English and German, but with almost entire correctness. Imagine my delight at such a conversation. Of Danish books, however, I found in his rich and excellent philological collection no more than Baden’s Grammar, and Hallage’s Norwegian Vocabulary, and in the library Haldorson’s Icelandic Dictionary, in which he made me read him a couple of pages of the preface, as a lesson in pronunciation. Our conversation turned mostly on Northern and German literature. The last he is pretty minutely acquainted with, and he is very fond of German poetry, which he has succeeded in bringing into fashion with the ladies of Bologna, so that Schiller and Goethe, whom the Romans hardly knew by name, are here read in the

original, and their works are to be had in the library. This collection occupies a finely-built saloon, in which it is arranged in dark presses with wire gratings, and is said to contain about 120,000 volumes. Besides Mezzofanti, there is an under librarian, two assistants, and three other servants. Books are bought to the amount of about 1,000 scudi, or more than £200 sterling a year. Mezzofanti is not merely a linguist, but is well acquainted with literary history and bibliography, and also with the library under his charge. As an author, he is not known, so far as I am aware; and he seems at present to be no older than about forty. I must add, what perhaps would be least expected from a learned man who has been unceasingly occupied with linguistic studies, and has hardly been out of his native town, that he has the finest and most polished manners, and, at the same time, the most engaging good-nature."

Much more interesting in itself, as well as for its author, is the account given by the celebrated German philologist Frederic Jacobs. It brings us down about five years further than those which we have last been discussing, his visit to Mezzofanti having occurred in August, 1825. Herr Jacobs quotes and confirms the statements which we have already seen, from Baron von Zach's "Correspondence," and proceeds to say: "I was most kindly received by him; we spoke in German for above an hour, so that I had full opportunity for observing the facility with which he spoke; his conversation was animated; his vocabulary select and appropriate, his pronunciation by no means foreign; and I could detect nothing but here and there a little of the North German accent. He was not unacquainted with German literature; spoke among other things of Voss's services in the theory of metre, and made some observations on the imitation of the metrical system of the ancients. His opinions were precise, and expressed without dogmatism. This fault, so common among persons of talent, appears quite foreign to him, and there is not a trace of charlatanism about him."

The testimony borne by Herr Jacobs to Mezzofanti's scholarship and philological attainments, even in a department but little cultivated, is of some importance. He pro-

ceeds to describe another peculiarity of his extraordinary faculty, equally deserving of notice. "Not less remarkable are the ease and readiness with which he passes in conversation from one language to another, from the north to the south, from the east to the west, and the dexterity with which he speaks several of the most difficult together without the least seeming effort; and whereas, in cognate languages, the slightest difference creates confusion, so that, for instance, the German in Holland or the Dutchman in Germany often mixes the sister and mother tongues so as to become unintelligible, Mezzofanti ever draws the line most sharply, and his path in each realm of languages is uniformly firm and secure." We may also add Jacob's description of the personal appearance of the great linguist.

"Mezzofanti," writes the German professor, "is of the middle size or rather below it; he is thin and pale, and his whole appearance indicates delicacy. He appears to be between fifty and sixty years old (he was really, in 1825, fifty-one;) his movements are easy and unembarrassed; his whole bearing is that of a man who has mixed much in society. He is active and zealous in the discharge of his duties, and he never fails to celebrate mass every day."

It is time, however, to follow Mezzofanti to Rome, which, of course, must be regarded as the chief theatre of his celebrity. While he was at Bologna he had maintained an occasional correspondence on philological subjects with Father (afterwards Cardinal) Cappellari, and eventually Pope Gregory XVI. While Cappellari was Cardinal Prefect of the Propaganda, his esteem for his correspondent was increased by an act of disinterestedness on the part of Mezzofanti which came to his knowledge, namely, his declining the offer of (to him) a considerable sum of money voted and sent to him by the congregation, in acknowledgment of some literary services rendered by him to the Propaganda; and after Cappellari's elevation to the Pontificate, he set his heart upon drawing the "Bolognese prodigy" to Rome. An occasion presented itself in the end of 1832. After the failure of the attempted revolution in the Papal States during that year, a deputation from the legation of Bologna was sent to Rome, of which Mezzofanti was a member; and the

Pope urged this request so strongly upon him, that, after what his holiness jokingly called a 'regular siege,' (*veramente un assideo*) he consented to the change. Gregory XVI, used afterwards good-humoredly to say, "that this was the only good that resulted from the revolution of Bologna.

Upon his settling in Rome, Mezzofanti's humble interests and wants were generously cared for by his friend and patron. He was appointed to a prebend in St. John Lateran's and afterwards to a canonry in St. Peters, together with the Rectorship of the college of the *Pietrini* attached to that church; and on the transfer of the celebrated Angelo (afterwards cardinal) Mai from the post of Vatican librarian to that of Secretary of the Propaganda, Mezzofanti was installed in the charge of the Vatican library, which he held till 1840, when, in conjunction with Mai, he was elevated to the cardinalate. And even in this, the crowning step of his promotion, the same considerate generosity followed him. Presuming on the slenderness of his friend's resources, the Pope presented him, from the privy purse, with the State equipages and the other details of the outfit usually provided by a new cardinal at his installation.

Mezzofanti continued to enjoy the friendship of Gregory XVI until his death, and was equally beloved by the present Pope, whom he had known before his promotion, and to whom he was tenderly attached. The remaining years of his life were full of honor and distinction, although his change of rank brought little alteration in the simple habits which he had contracted as an humble professor. It is impossible, indeed, to conceive a position more advantageous for his favorite pursuit than that which Mezzofanti now occupied. Where should we find a more "diverse-speaking" crowd than that which annually flocks to the attractive spectacle of the Holy Week at Rome? And even independently of these, what we may call the standing population of Rome is perhaps the most polyglot in the world. Ecclesiastics from every part of the Christian world may be met almost daily in the ante-rooms of the Vatican, or the *segreteria* of the Propaganda. The convents and other religious houses of the city number among their members complexions of every hue and tongues of every variety of intonation;

above all, the college of the Propaganda is in itself a little world, comprising every language and every dialect of the nations in communion with Rome. All these resources were open to Mezzofanti, and he availed himself zealously of them all.

We are enabled, from a very careful and elaborate sketch of Mezzofanti, published in the year 1846, in the well-known Munich journal, "*Historisch Politische Blätter*," to supply some additional details of this portion of his life. The author of this sketch is Guido Gorres, son of the celebrated Roman Catholic professor and publicist of that name, and himself not unfavorably known in German literature. During a protracted residence in Rome, Gorres enjoyed the intimate acquaintance of Mezzofanti, and took every opportunity which presented itself of testing his extraordinary gift by observing him in conversation with foreigners of all varieties of languages. It would hardly interest any of our readers to record the many offices held by him at different times as cardinal, the congregations of which he was a member, or the honors which he received, which occupy a full page of Gorres' memoir. The following account of Mezzofanti's linguistic talent is more to our purpose. It is drawn up, not only with great detail, but, what is equally important, with more regard for scientific arrangement than any of those we have yet seen.

"The vastness of the range of languages which he had mastered borders closely on the incredible; and, what appears hardly less marvellous, this enormous store has not only not produced any Babel-like confusion in his head, but on the contrary lies completely at his command, so that, without the least effort and without any observable interval, he passes from one realm of language to another, as lightly as a bird hops from spray to spray. He is familiar with all the European languages. And by this we understand not merely the old classical tongues and the first-class modern ones; that is to say, the Greek and Latin, the Italian, French, Spanish, Portuguese, German and English; his knowledge embraces also the languages of the second class, namely, the Dutch, the Danish, and Swedish, the whole Slavonic family, the Russian, Polish, Bohemian or Czechish

and Servian, the Hungarian and Turkish; and even those of the third and fourth class, the Irish, Welsh, Albanian, Wallachian, Bulgarian and Illyrian, are equally at his command. On my happening to mention that I had once dabbled a little in Basque, he at once proposed that we should set about it together. Even the Romani of the Alps, and the Lettish, are not unfamiliar to him; nay, he has made himself acquainted with the Lappish, the language of the wretched nomadic tribes of Lapland; although he told me he did not know whether it should be called Lappish or Laplandish. Passing along to Asia, it is true that he does not claim acquaintance with all the dialects of this vast region, with its desolate steppes, and its fallen, degenerate and fast-decreasing population; but nevertheless, even here, there is hardly one of the more prominent languages, especially those which fall within the circle of European intercourse, that has escaped his grasp. Thus he is master of all the languages which are classed under the Indo-German family: the Sanscrit and Persian, the Koordish, the Armenian, the Georgian; he is familiar with all the members of the Semitic family, the Hebrew, Arabic, Syriac, Samaritan, Chaldee, the Sabaic, and even the Chinese, which he not only reads but speaks. As regards Africa, and its Hamitic races, the recent revival of intercourse with that country, and especially with Egypt and Abyssinia, have facilitated the extension of his acquaintance with its languages. He knows the Coptic, Ethiopic, Abyssinian, Amharic,<sup>1</sup> and Angelese. I cannot from my own knowledge say whether he has acquired any of the native languages of America, except the Californian; but I have been told that even while he was in Bologna he learned some of these from an ex-Jesuit who had sojourned as a missionary on that continent."—[*Historisch Politische Blätter*, 1842, pp. 279-80.

Mezzofanti actually carried out his intentions in reference to the Basque language in both its dialects, and we are able, also, of our own knowledge, to resolve the doubt which Herr Guido Gorres here raises. Mezzofanti had acquired, long before he came to Rome, more than one of the native

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1 The original is *Ancharische*: but we presume it is a misprint.



languages of Central and South America. He spoke the dialects of Mexico and of Brazil. Among the few literary remains which he has left is a Mexican calendar, drawn up by himself, and illustrated by drawings from the pencil of one of his nieces, Signorina Minarelli. The catalogue of his library contains several books not only in Mexican, Brazilian, Peruvian and Chilian, but even in one of the languages of North America—that of the Delaware Indians.<sup>1</sup>

Herr Gorres, on his own part, attests the fluency, the precision, and the unexceptionable accent with which the Cardinal spoke German; and he tells, as a curious example of the accuracy of his knowledge of other languages, that a Russian lady of his acquaintance, who had written in Russian to introduce a friend to Mezzofanti, was rallied by him afterwards on the ungrammatical and inelegant style in which she had written, and was forced to acknowledge the particular faults in her composition, which he had pointed out. We, ourselves, remember to have heard the highest testimony to the accuracy and elegance of a letter of his in Portuguese, addressed to the Portuguese ambassador. It was perfect, he declared, even to the nicest conventionalities of the epistolary form in use in Portuguese society.

We shall return hereafter to some of the details of Gorres' account; but, in the meanwhile, we shall add another of Mr. Watts's authorities, an anonymous Russian traveler, who visited Rome a few years later:

"Twice," writes this traveler, "I have visited this remarkable man, a phenomenon as yet unparalleled in the literary world, and one that will scarcely be repeated unless the gift of tongues be given anew, as at the dawn of Christianity. Cardinal Mezzofanti spoke eight languages fluently in my presence: he expressed himself in Russian very purely and correctly; but as he is more accustomed to the style of books than that of ordinary discourse, it is necessary to use the language of books in talking with him for the conversation to flow freely. His passion for acquiring languages is so great, that even now, in advanced age, he continues to study fresh dialects. He learned Chinese not long

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<sup>1</sup> See *Catalogo della Libreria del Card. Mezzofanti*, p. 25.

ago ; and is constantly visiting the Propaganda for practice in conversation with its pupils of all sorts of races. I asked him to give me a list of all the languages and dialects in which he was able to express himself, and he sent me the name of God, written in his own hand, in fifty-six languages, of which thirty were European, not counting their subdivision of dialects ; seventeen Asiatic, also, without reckoning dialects ; five African, and four American. In his person, the confusion that arose at the building of Babel is annihilated, and all nations, according to the sublime expression of Scripture, are again of one tongue. Will posterity ever see anything similar ? Mezzofanti is one of the most wonderful curiosities of Rome."

We have seen that one of the chief opportunities for extending and improving his gift of tongues, which Mezzofanti enjoyed at Rome, was his easy and constant access to the living polyglot, the college of the Propaganda. Nowhere, perhaps, in the world is the diversity of tongues so strikingly exhibited as at the annual academical exercises of this celebrated institution, which are held during the octave of the Epiphany, the special festival of the Propaganda. These exercises consist of declamations, both of prose and of poetry, in each of the languages which are represented among the students actually in the college, and which frequently exceed forty in number. On these occasions, Mezzofanti used to be the life of the assemblage. Miss Mitford has given an interesting account of this performance, derived from the late Roman Catholic Bishop Baines.

" He (Dr. Baines) gave a most amusing account of Cardinal Mezzofanti—a man, in all but his marvellous gift of tongues, as simple as an infant. 'The last time I was in Rome,' said he, 'we went together to the Propaganda, and heard speeches delivered in thirty-five or thirty-six languages, by converts of various nations. Amongst them were natives of no less than three tribes of Tartars, each talking his own dialect. They did not understand each other, but the Cardinal understood them all, and could tell with critical nicety the points in which one jargon differed from the others. We dined together, and I entreated him,

having been in the tower of Babel all the morning, to let us stick to English for the rest of the day. Accordingly, he did stick to English, which he spoke as fluently as we do, and with the same accuracy, not only of grammar, but of idiom. His only trip was in saying, 'That was before the time when I remember,' instead of, 'before my time.' Once, too, I thought him mistaken in the pronunciation of a word. But when I returned to England (continued Dr. Baines) I found that my way was either provincial or old-fashioned, and that I was wrong and he was right.

" 'In the course of the evening, his servant brought a Welsh Bible which had been left for him. 'Ah!' said he, 'this is the very thing; I wanted to learn Welsh.' Then he remembered it was in all probability not the authorized version. 'Never mind,' he said, 'I think it won't do me any harm.' Six weeks after, I met the Cardinal and asked him how he got on with his Welsh. 'Oh!' replied he, 'I know it now; I have done with it.'"<sup>1</sup>—[*Miss Mitford's Recollections of a Literary Life*, vol. ii. p. 203.

It was not, however, in the mere capacity of a spectator, or even of a patron, that Mezzofanti was known in connection with the exercises of the Propaganda. It was notorious in Rome that he took an active and good-natured part in the revision, and perhaps even the actual preparation, of the compositions intended for delivery. "He was frequently himself," writes Guido Gorres, "the author of these polyglot poems; and there can be no doubt that there never was a poet who essayed his skill in such a variety of tongues. A disinterested act of good nature, truly, for in most cases, with the exception of himself and the individual who is reciting, there is not a soul in the assembly who can understand a word of it, much less appreciate the poetical merit of the composition." We can ourselves bear testimony to the truth of Gorres' statement. The declamations in the Tamil dialect of Hindostanee, recited year after year by an

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<sup>1</sup> Mr. Watts, however, adds, "that this statement could not imply that Mezzofanti could speak the language which he had thus acquired from a printed source." Mr. Watts was informed "by Mr. Thomas Ellis, of the British Museum, a Welsh gentleman who saw him more than once in his later years," that he was quite unable to keep up a conversation in the language of the Cymry. Mr. Ellis felt certain that he could not read with facility an ordinary book.

East Indian student of our acquaintance; were invariably written by Mezzofanti.

Those, however, who desired to witness in its full perfection the extraordinary gift of this wonderful man, instead of these formal holiday exhibitions, sought rather, as we have occasionally done, to see him in his ordinary intercourse with the youths of the Propaganda. It was for years his favorite relaxation. In summer he generally spent an hour, in winter an hour and a half, among them; partly for the sake of practice in their various languages, partly as an innocent and instructive recreation. In the free and familiar intercourse which the good Cardinal encouraged and maintained with those youths, there sometimes arose sportive trials of skill, in which their great amusement consisted in endeavoring to puzzle the Cardinal by a confusion of languages, and to provoke him into answering in a language different from that in which he was addressed. The idea of these trials (which reminded us of the old-fashioned game of "cross-question") appears to have originated with the good-humored old Pope, Gregory XVI, soon after Mezzofanti's arrival in Rome. "One day," says M. Manavit, "Gregory the XVI provided an agreeable surprise for the polyglot prelate, and a rare treat for himself, in an improvised conversation in various tongues—a regular linguistic tournament. Among the mazy alleys of the Vatican gardens, behind one of the massive walls of verdure, which, from its peculiar glory, the Pope placed a certain number of the Propaganda students in ambuscade. When the time came for his ordinary walk, he invited Mezzofanti to accompany him; and, as they were proceeding gravely and solemnly, on a sudden, at a given signal, these youths grouped themselves for a moment on their knees before his Holiness, and then, quickly rising, addressed themselves to Mezzofanti, each in his own tongue, with such an abundance of words and such a volubility of tone, that, in the jargon of dialects, it was almost impossible to hear, much less to understand them. But Mezzofanti did not shrink from the conflict. With the promptness and address which were peculiar to him, he took them up singly, and replied to each in his own language with such spirit and elegance as to amaze them all.

Sometimes, however, a new language made its appearance in the Propaganda. In that case it was Mezzofanti's great delight to commence his studies once again. If the language had any printed books—as a Bible, catechism, or similar work—he would learn from the new comer to read and translate them. But if, as more than once occurred, the language was entirely without books, he made the pupil speak or recite some familiar prayer, until he picked up first the general meaning, and afterwards the particular sounds, and what may be called the rhythm of the language. The next step was to ascertain and classify the particles, both affixes and suffixes; to distinguish verbs from nouns, and substantives from adjectives; to discover the principal inflections, etc. Having once mastered the preliminaries, his power of generalising seemed rather to be an instinct than an exercise of the reasoning faculty. With him the knowledge of words led almost without an effort to the power of speaking; and probably the most signal triumph of his career—his mastery of Chinese—was the one which was accomplished at once, latest in life and with fewest facilities. It was so complete, too, that he was able not only to converse freely with the Chinese students in the Propaganda, but even to preach to them in their native language. In the year 1843, he delivered to them in Chinese a comprehensive series of religious instructions; or, to use the technical phrase employed by Roman Catholics, he conducted for them, in Chinese, a spiritual retreat, consisting of the celebrated Exercises of St. Ignatius of Loyola.

Mezzofanti died on March 15, 1849, in the seventy-fifth year of his age. He was “the greatest linguist the world has ever seen.”

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THE true felicity of life is to be free from perturbations, to understand our duties towards God and man, to enjoy the present without any anxious dependence upon the future, not to amuse ourselves with either hopes and fears, but to rest satisfied with what we have, which is abundantly sufficient; for he that is so, wants nothing.

*OBLIGATORY INSTRUCTION.*

HOW shall we reclaim neglected children? With growing faith in moral suasion as our main reliance in preventing absenteeism, I now contend for the authority of the law with its sterner sanctions to fall back upon in extreme cases. When parental pride, interest, or authority fails, and juvenile perverseness is incorrigible, legal coercion should be employed,

When our population was homogeneous, as was the case in the early history of New England, there was little absenteeism from school. All valued education, and, with rare exceptions, all native-born citizens could read and write. "Where were you born?" was the inquiry of Judge Daggett, long the Kent Professor of Law in Yale College, on finding any witness on the stand, or criminal in the dock, who could not read and write; and with only three exceptions, during his long time of judicial service, he never received the answer, "In Connecticut." But recently, immigration has caused startling figures of illiteracy, especially in our large cities. With this ignorance comes indifference to education, for illiteracy involves insensibility to the evils it engenders.

To remedy truancy, we should inquire first for its causes. These are various. So should be the remedies in order to meet each exigency. We should not despair of reclaiming the most desperate. They may be desponding, with no hope of bettering their condition. No pride of character, respect for truth, or even sense of shame—yes, false and profane, and yet we must not give them up as hopeless cases, but with faith in Christian incentives, strive to stir the conscience and win the heart. Though unaccustomed to kindness, such boys are not of course insensible to its influence. The tones of sympathy may touch a chord which will vibrate more sweetly because of its very strangeness. If we will put ourselves in the place of wayward children, so as to appreciate their wants, weakness, and wickedness even, we may tell them not in vain both of the perils they incur and the privileges they neglect. The most forlorn

child I have met, when properly approached, has kindly received friendly counsel and even warning as to his offenses. I can recall many instances of youth thus rescued from the street school who are now virtuous citizens. How amply have such services been compensated by the grateful acknowledgments, or tears of joy, more eloquently showing their cherished remembrance of timely counsel! Neglect of school may usually be traced to parental indifference, intemperance, or other evil home influence. Sometimes poverty, loss of paternal control, orphanage, hard experience of neglect and conscious degradation, are the sources of this mischief. "The street Arabs," the juvenile vagrants and beggars who abound in certain European countries, are the hardest to get to school, or to teach when there. They live in the street, without guardianship and without employment, except such as chance throws in their way. Many specimens of the same sort are now thronging into our large cities.

When poverty detains from school, public or private charity should meet the exigency, supplying the lack of decent clothing and inviting the attendance of the most destitute absentees. In Sweden and other European countries those children whose parents are unable to clothe them are relieved by the parish. Among us, the parents of neglected children, if not vicious, are mostly immigrants. Of the advantages of education they yet know little. A dormant parental pride, if not a sense of their duty as the divinely appointed guardians of their offspring, may be awakened. They may be led to see that education will promote their interest and increase their children's happiness, thrift, and prosperity through life. Personal kindness, tact, and persuasion may thus win those that seem perverse.

My former objections to compulsory attendance were fully removed by observations recently made in Europe. Mingling much with plain people in Germany and other countries where attendance at school is compulsory, I sought in every way to learn their sentiments on this question. After the fullest inquiry in Prussia, especially among laborers of all sorts, I nowhere heard a lisp of objection to this law. The masses everywhere favor it. They say education is a

necessity for all. They prize it and are proud of it. Attendance is voluntary, in fact. Nobody seems to think of coercion. The law is operative, but it executes itself, because it is right and beneficent and commands universal approval. It is only the legal expression of the public will.

Education, more than anything else, has fraternized the great German nation. "Whatever you would have appear in a nation's life, that you must put into its schools," was long since a Prussian motto. The school has there been the prime agent of loyalty. Love of country is the germ it long ago planted in the heart of every child. The fruit now matured gladdens and enriches the whole land. Wherever that lesson is heeded it will enrich the world. Devotion to fatherland is a characteristic sentiment of the German people. Shall such a people with such a history, complain of compulsory attendance? This law itself has been a teacher of the nation. It has everywhere proclaimed the necessity and dignity of the public school. Kings and nobles and ministers of State have combined to confirm and diffuse this sentiment till now it pervades and assimilates all classes.

The absence of complaint about coercive attendance is not due, as some have supposed, to an enforced reticence or restraint. Proofs of the utmost freedom of speech abound. The Prussian military system is a grievous burden to the people. They dread it and bitterly denounce it. The law which takes every young man from his friends, his business and his home for three weary years of military service, is hard, and is freely condemned. Many young families have left their fatherland for America, and many more are now planning to emigrate in order to escape this arbitrary conscription. But even the father who is most aggrieved by the army draft, lauds the school draft.

In various parts of Saxony, I inquired of school directors and others, "Do you have any difficulty in executing the coercive law?" The answers were all substantially the same. "Many years ago," replied one, "there was some opposition. But the results of the law have commended it to all, and they obey it without complaint and almost without exception." The present generation of parents, having themselves experienced its advantages, are its advocates.



Said a resident of Dresden, "A healthy child of school age can hardly be found in this city who has not attended school. Were the question of compulsory attendance to be decided to-morrow in Saxony by a plebiscite, it would be sustained by an almost unanimous verdict. Public opinion is now stronger even than the law. The people would sooner increase than relax its rigor." I nowhere learned of any recent cases of punishment for its infractions. In many places I was assured that the penalty is practically unknown.

The principle of obligatory instruction was advocated by the people before it was enacted by the government. The address of Luther to the municipal corporations in 1554, contains the earliest defense of it within my knowledge, in which he says, "Ah, if a State in time of war can oblige its citizens to take up the sword and the musket, has it not still more the power and is it not its duty to compel them to instruct their children, since we are all engaged in a most serious warfare waged with the spirit of evil which rages in our midst, seeking to depopulate the State of its virtuous men? It is my desire, above all things else, that every child should go to school, or be sent there by a magistrate."

The germ of this system in Prussia is found in a decree of Frederic II. in 1763: "We will that all our subjects, parents, guardians, and masters, send to school those children for whom they are responsible, boys and girls, from their fifth year to the age of fourteen." This royal order was revived in 1794, and in the code of 1819 made more stringent, with severe penalties; first warnings, then small fines, doubling the fines for repeated offenses; and finally imprisonment of parents, guardians and masters.

The penalties now are:

1. Admonition, in the form of a note of warning from the President of the local School Commission.

2. Summons to appear before the School Commission, with a reprimand from the presiding officer.

3. Complaint to the Magistrate by the Commission, who usually exacts a fine of twenty cents, and for a second offence forty cents, for a third eighty cents, doubling the last fine for each repetition of the offence.

The register of attendance and absence are kept with scrupulous exactness by the teachers and delivered to the President of the School Commission. Excuses are accepted for illness, exceedingly severe weather, great distance from school, and sometimes on account of the pressure of work in harvest time.

The objections to such a law, I will consider in another article.—*B. G. Northrop, in Christian Union.*

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### *GOOD MANNERS IN THE TEACHER.*

“**M**UCH of the noblest work in life is done by ill-dressed, awkward, ungainly persons; but that is no more reason for undervaluing good manners and what we call high breeding, than the fact that the best part of the sturdy labor of the world is done by men with exceptionable hands, is to be urged against the use of Brown Windsor as a preliminary to appearance in cultivated society.”

So says one of the popular writers of the day, and, considering his words, we are led to ask: Is it true that the tendency is increasing to divorce utility from beauty, strength from loveliness? We think no close observer of the manners and general appearance of the mass of society, will deny that in all that pertains to the amenities of life, we are as a people deteriorating.

If now we meet a man fastidious in dress, and courtly in manners, we at once pronounce him “A gentleman of the old school.” And among those ladies who are considered leaders in society, it is hard to find such real gentlewomen as made up the “Republican Court” of nearly a century ago, or in humble life presided over quiet homes with a grace and dignity which their daughters have not inherited.

It is said these are matters of minor importance; that the cultivation of the mind and heart are the essentials. Philosophy teaches that our natures are three-fold, and embrace capacities for the true, the good, and the beautiful. Is not that, then, an imperfect development which educates a part, and ignores the rest? Not so does God work; he

gives to his creatures not only strength and utility, but symmetry and beauty. If these things are worthy in his regard, are they beneath our notice?

Again, it is said that external beauty is a natural consequence of internal culture, but observation and experience tell us this is not only not true, but often the very reverse—that in proportion as we become absorbed in study we grow careless of outward appearance and observances. The wisest and best are often least attractive, and, by being so, weaken their power for good, for we all acknowledge that, other things being equal, the person of elegant bearing and pleasing address possesses far the greater influence.

This has been fully proven in the history of the woman movement. So long as the cause was represented by awkward and ill-dressed women, the public contented itself with sneering at them, paying little or no heed to the principles they advocated. But when such women as Mrs. Stanton, Julia Ward Howe, Anna Dickinson, and Kate Field, well dressed, graceful, accomplished ladies appeared upon the stage, they at once commanded respectful attention.

If there is so great potency in what is called high breeding, no one can so ill afford to dispense with its aid as the educator. The charm which its possession lends seldom fails to win the admiration and respect of youth, and adds new beauty to the truths which they impart, yet how many teachers there are, in the schools of our State to-day, who are, or appear to be, ignorant of the commonest rules of politeness! Said a young lady—a pupil in the High School of one of our largest towns—"I think it is an insult to us girls to put over us as an example such a woman as our Preceptress! She may know books, but she don't know *decency*," and then followed a catalogue of sins against good manners of which she had been guilty in the presence of her scholars, for which a girl of ten years should have blushed.

Nor is it enough that the teacher is a gentleman or a lady. Example is much, but it is not all. You do not suppose the fact of your being highly educated will alone make a scholar of your pupil; there must be direct teaching. You must point out to him the means by which the end was attained. No more will the fact of your being polite and polished

necessarily make your pupils so. In this, as in the other, there must be instruction, and if it is as desirable as it seems, is it not the duty of every teacher to educate his pupils as faithfully and carefully in this direction as in any other?

Fifty years ago it was as much expected that the teacher would instruct his pupil in the rules of politeness as in those of arithmetic, and the scrupulous observance of those rules was as fully demanded in the teacher, and required in the scholar, as if one was the host and the other the guest in a private parlor. We are apt to think of those days with a certain degree of contempt, as exceedingly old foggy, but we cannot deny that such schools sent out gentlemen and ladies whose bearing was a passport to circles where neither wealth nor learning alone would have admitted them.

Much stress has wisely been laid on the influence of beautiful surroundings, the presence of works of art, flowers, etc., in the school-room. They are valuable as aids, but if we rely on them alone for refinement, they will no more serve our purpose than the presence of ever so extensive an apparatus will of itself teach Natural Philosophy.

Another requisite I would place, even before good manners, in my competitive examination, is that of CLEANLINESS, which is as near godliness now as it ever was. Does the mention of such a thing shock you? Probably you have not seen, as I have, teachers come before their pupils with hands sadly in need of the Brown Windsor of which Dr. Holmes speaks, hair unkempt, linen or lace far from immaculate, and clothes which indicate a long absence of the brush. If, as some such claim, the outward is a type of the inward, there is an unclean spot somewhere in the mind or heart of that individual which unfits him or her to be the guide of youth. In calling attention to these needs, we by no means wish to depreciate the value of the more solid work. These are but the blossoms on the tree. It might serve all the purposes of a tree without them, but how much more lovely is it with them! A diamond is a diamond though in the rough, but its beauty is apparent only when polished.—*The School.*

## GEOGRAPHICAL NOTES.

UNITED STATES.—The one unpardonable piece of ignorance in an American school-boy is not to know the number of States and Territories in the Union. It must be confessed that this knowledge has been rendered somewhat difficult by the diplomacy of the past few years, and by the revival in the popular mind of what the Germans call *Erdgier*—or the thirst for annexation. We broke over the wholesome rule (for a republic) that contiguous territory alone should be added by way of enlargement, when we acquired Alaska of the Russians. The national honor (but no other consideration) required that we should break it again in the case of St. Thomas. Had the treaty for it with Denmark been carried through, it would, perhaps, have saved us from coveting San Domingo, and from all the scandal of an unauthorized attempt to gain possession of it by a *coup d'état*. For, let us remark in passing—what is by no means generally known—the most censurable feature of the whole transaction was that the President sent Gen. Babcock to San Domingo, ostensibly merely to survey the scene of the proposed bargain, after his Cabinet had, on the only occasion when he consulted them, pronounced emphatically against annexation; that on Gen. Babcock's return with a signed treaty for which he had pledged the President's support, and which had been negotiated entirely without the knowledge of the Department of State, the President made but a single allusion to it in Cabinet meeting, and being rebuffed dropped the subject and never afterwards introduced it; and that in spite of the known opposition of the Secretary of State, the measure was vigorously pressed upon the Senate by the members of the President's military family. But this by the way. San Domingo being too near, it would seem, a naval station in the South Pacific was the next desideratum, and a protectorate the means selected for obtaining it. The history of this manœuvre is not free from the obscurity which attended the last, but it also would appear to have been undertaken, at least in the first instance, by irresponsible persons without communication with the

State Department. At all events, what is known is, that a Mr. Stewart, President of the "Central Polynesia Land and Commercial Company," and William H. Webb, general manager of the Australian line of steamers, arranged a treaty securing to the United States the exclusive privilege of a naval station on the Island of Tutuila (one of the Navigator group), in return for our protection. The fifth clause is said to read as follows:

"We do acknowledge the absolute authority of the United States of America with regard to all matters whatsoever, and bind ourselves to adopt the common laws of America."

This agreement was signed by two rival kings, uncle and nephew (a minor)—the former a high chief of Savaii, the latter ruling over Upolu, who had been engaged in a desolating warfare upon each other—and by 120 chiefs, as well as the British and American consuls. Subsequently accepted at Washington, it was presented to the Senate for confirmation, and lobbied for by a Capt. Wakeman, who made use of some extraordinary arguments, such as this passage in regard to the women of the islands in question:

"They stand out in their beatific nudity and loveliness, the emblem of the great Master's handiwork in His happiest mood, a combination of beauty, grace and innocence, which no Christian can look upon without the deepest sentiments of love and admiration, both toward the Creator and the created."

It was further urged from the same quarter, that the Australian Company having been the means of bestowing this great benefit on the country, Congress could do no less than grant the subsidy for which it was at that moment a supplicant.

So ingenious a plan merited success, but we are unable to state whether the subsidy was voted, and even have historic doubts about the present ownership of the Samoan Islands. Nevertheless, whether American or native property, Tutuila will doubtless be used as an intermediate stopping-place by the Australian steamers, being in every respect conveniently situated on the direct route to Auckland and Sydney, and nearly enough equidistant between the Sandwich Islands and New Zealand (central long. 170° W., lat. 14° S.) There are two good ports on this island, that of Leone, at the S.W.

extremity, and (the best) Pago-Pago on the south side. It is a high and broken volcanic island, of some 240 square miles, and a population of 8,000. Savaii is the largest and westernmost of the group, containing 700 square miles, and 20,000 inhabitants. Concerning its interior very little is known, and American explorers have now a good opening to distinction. There are two other large islands, Manua, and Upolu (560 square miles, and 25,000 inhabitants); and five smaller ones: Rose, low and uninhabited except by birds, Oloosinga, Ofoo, Manono (a missionary station, population 1,100), and Apolima. The navigator (Samoan) Islands thus show a population of nearly 60,000, the natives ranking second among the Polynesians in physical and moral characteristics. They abound in tropical fruits—cocoa-nut, bread-fruit, bananas, yams, sweet-potatoes, pine-apples, coffee, sugar-cane, ginger—with plenty of ratan and bamboo. The group is encircled by one of the branches of the (W. to E.) south equatorial current. It was discovered in the middle of 1768, by Count de Bougainville, during his circumnavigation of the globe, the same who commanded with gallantry under Count de Grasse when his squadron was co-operating with the American forces against those of Great Britain (1781-82).

—A Ship Canal across the Peninsula of Florida is proposed. The route is up the St. John's River, 127 miles, then up the Ocklawaha River for 60 miles. To this point a ship canal for the distance of forty miles must be cut through the swamps to the Amaxara River, at a spot thirty-five miles from its mouth, where it empties into the Gulf of Mexico, near Cedar Keys. By this route 650 miles will be saved on the voyage between the mouth of the Mississippi and the Atlantic ports. As the trade of 1871 between the ports on the Gulf of Mexico and those on the Atlantic Coast amounted to 800,000 tons, it is believed that a handsome revenue would be derived from the proposed canal.

**BRITISH AMERICA.**—Captain Cameron is to be the surveyor of the boundary line between the United States and the Dominion of Canada through the lakes, forests and Rocky Mountains.

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needs no comment. Mazatlan, receives letters from the capital itself. The Mazatlan is twenty-two days in Europe may be reached in twenty-five days from New York. The Mexicans have been endeavoring to build a railroad from Vera Cruz to the capital, working at both ends, but more than a third of it is yet undone. Such are some of the effects of bad government.

**CENTRAL AMERICA.**—The U. S. Exploring Expedition under Capt. Hatfield is examining three routes for an inter-oceanic canal, with good prospects of success.

**SOUTH AMERICA.**—There are 60,000 Italians in Buenos Ayres, forming, if we are not mistaken, the majority of the population. The number of French, however, is not considerable. Add to these the Spanish of the Argentine Republic, the Portuguese of Brazil, and their German colonists in Rio Grande do Sul, and Dutch and English in Guiana, and we have a little Europe in the great continent to the south of us. The Spanish Academy at Madrid has invited the Spanish-American men of letters to co-operate in a movement to give unity and stability to their common tongue. A perfect Babel of idioms in the republics of South America renders such a task eminently necessary.

**EUROPE.**—The *Pomerania*, charged last year with the scientific exploration of the Baltic, began its voyages by passing from Stockholm to Gothland, and thence to the Russian coast, returning to make a new transit towards Memel, and thus traversing in three different directions the deepest part of the sea. The expedition next skirted the Southern coast as far as Holstein, sounding at every step, and determining temperatures and the directions of submarine currents. Nowhere was a greater depth found than 720 feet (German); - from 600 to 720 the water was icy cold and adverse to vegetable life and to all but a few animal organisms, to which the brackishness is also fatal. Animal life, in fact, is found concentrated between the surface and a depth of 30 feet, while plants occur not lower than 60. West of Rügen the



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1 See *Catalogo della Libreria del Card. Mezzofanti*, p. 25.

MEXICO.—Here is a fact which needs no comment. Mazatlan, on the west coast of Mexico, receives letters from Europe more quickly than from the capital itself. The courier from Mexico to Mazatlan is twenty-two days in making the trip, while Europe may be reached in twenty-one, via San Francisco and New York. The Mexicans have been for fifteen years endeavoring to build a railroad from Vera Cruz to the capital, working at both ends, but more than a third of it is yet undone. Such are some of the effects of bad government.

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ago ; and is constantly visiting the Propaganda for practice in conversation with its pupils of all sorts of races. I asked him to give me a list of all the languages and dialects in which he was able to express himself, and he sent me the name of God, written in his own hand, in fifty-six languages, of which thirty were European, not counting their subdivision of dialects ; seventeen Asiatic, also, without reckoning dialects ; five African, and four American. In his person, the confusion that arose at the building of Babel is annihilated, and all nations, according to the sublime expression of Scripture, are again of one tongue. Will posterity ever see anything similar ? Mezzofanti is one of the most wonderful curiosities of Rome."

We have seen that one of the chief opportunities for extending and improving his gift of tongues, which Mezzofanti enjoyed at Rome, was his easy and constant access to the living polyglot, the college of the Propaganda. Nowhere, perhaps, in the world is the diversity of tongues so strikingly exhibited as at the annual academical exercises of this celebrated institution, which are held during the octave of the Epiphany, the special festival of the Propaganda. These exercises consist of declamations, both of prose and of poetry, in each of the languages which are represented among the students actually in the college, and which frequently exceed forty in number. On these occasions, Mezzofanti used to be the life of the assemblage. Miss Mitford has given an interesting account of this performance, derived from the late Roman Catholic Bishop Baines.

" He (Dr. Baines) gave a most amusing account of Cardinal Mezzofanti—a man, in all but his marvellous gift of tongues, as simple as an infant. ' The last time I was in Rome,' said he, ' we went together to the Propaganda, and heard speeches delivered in thirty-five or thirty-six languages, by converts of various nations. Amongst them were natives of no less than three tribes of Tartars, each talking his own dialect. They did not understand each other, but the Cardinal understood them all, and could tell with critical nicety the points in which one jargon differed from the others. We dined together, and I entreated him,

having been in the tower of Babel all the morning, to let us stick to English for the rest of the day. Accordingly, he did stick to English, which he spoke as fluently as we do, and with the same accuracy, not only of grammar, but of idiom. His only trip was in saying, 'That was before the time when I remember,' instead of, 'before my time.' Once, too, I thought him mistaken in the pronunciation of a word. But when I returned to England (continued Dr. Baines) I found that my way was either provincial or old-fashioned, and that I was wrong and he was right.

"In the course of the evening, his servant brought a Welsh Bible which had been left for him. 'Ah!' said he, 'this is the very thing; I wanted to learn Welsh.' Then he remembered it was in all probability not the authorized version. 'Never mind,' he said, 'I think it won't do me any harm.' Six weeks after, I met the Cardinal and asked him how he got on with his Welsh. 'Oh!' replied he, 'I know it now; I have done with it.'"<sup>1</sup>—[*Miss Mitford's Recollections of a Literary Life*, vol. ii. p. 203.

It was not, however, in the mere capacity of a spectator, or even of a patron, that Mezzofanti was known in connection with the exercises of the Propaganda. It was notorious in Rome that he took an active and good-natured part in the revision, and perhaps even the actual preparation, of the compositions intended for delivery. "He was frequently himself," writes Guido Gorres, "the author of these polyglot poems; and there can be no doubt that there never was a poet who essayed his skill in such a variety of tongues. A disinterested act of good nature, truly, for in most cases, with the exception of himself and the individual who is reciting, there is not a soul in the assembly who can understand a word of it, much less appreciate the poetical merit of the composition." We can ourselves bear testimony to the truth of Gorres' statement. The declamations in the Tamil dialect of Hindostanee, recited year after year by an

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<sup>1</sup> Mr. Watts, however, adds, "that this statement could not imply that Mezzofanti could speak the language which he had thus acquired from a printed source." Mr. Watts was informed "by Mr. Thomas Ellis, of the British Museum, a Welsh gentleman who saw him more than once in his later years," that he was quite unable to keep up a conversation in the language of the Cymry. Mr. Ellis felt certain that he could not read with facility an ordinary book.

East Indian student of our acquaintance, were invariably written by Mezzofanti.

Those, however, who desired to witness in its full perfection the extraordinary gift of this wonderful man, instead of these formal holiday exhibitions, sought rather, as we have occasionally done, to see him in his ordinary intercourse with the youths of the Propaganda. It was for years his favorite relaxation. In summer he generally spent an hour, in winter an hour and a half, among them ; partly for the sake of practice in their various languages, partly as an innocent and instructive recreation. In the free and familiar intercourse which the good Cardinal encouraged and maintained with those youths, there sometimes arose sportive trials of skill, in which their great amusement consisted in endeavoring to puzzle the Cardinal by a confusion of languages, and to provoke him into answering in a language different from that in which he was addressed. The idea of these trials (which reminded us of the old-fashioned game of "cross-question") appears to have originated with the good-humored old Pope, Gregory XVI, soon after Mezzofanti's arrival in Rome. "One day," says M. Manavit, "Gregory the XVI provided an agreeable surprise for the polyglot prelate, and a rare treat for himself, in an improvised conversation in various tongues—a regular linguistic tournament. Among the mazy alleys of the Vatican gardens, behind one of the massive walls of verdure, which, from its peculiar glory, the Pope placed a certain number of the Propaganda students in ambuscade. When the time came for his ordinary walk, he invited Mezzofanti to accompany him ; and, as they were proceeding gravely and solemnly, on a sudden, at a given signal, these youths grouped themselves for a moment on their knees before his Holiness, and then, quickly rising, addressed themselves to Mezzofanti, each in his own tongue, with such an abundance of words and such a volubility of tone, that, in the jargon of dialects, it was almost impossible to hear, much less to understand them. But Mezzofanti did not shrink from the conflict. With the promptness and address which were peculiar to him, he took them up singly, and replied to each in his own language with such spirit and elegance as to amaze them all.

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Mezzofanti died on March 15, 1849, in the seventy-fifth year of his age. He was “the greatest linguist the world has ever seen.”

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THE true felicity of life is to be free from perturbations, to understand our duties towards God and man, to enjoy the present without any anxious dependence upon the future, not to amuse ourselves with either hopes and fears, but to rest satisfied with what we have, which is abundantly sufficient; for he that is so, wants nothing.

necessarily make your pupils so. In this, as in the other, there must be instruction, and if it is as desirable as it seems, is it not the duty of every teacher to educate his pupils as faithfully and carefully in this direction as in any other?

Fifty years ago it was as much expected that the teacher would instruct his pupil in the rules of politeness as in those of arithmetic, and the scrupulous observance of those rules was as fully demanded in the teacher, and required in the scholar, as if one was the host and the other the guest in a private parlor. We are apt to think of those days with a certain degree of contempt, as exceedingly old foggy, but we cannot deny that such schools sent out gentlemen and ladies whose bearing was a passport to circles where neither wealth nor learning alone would have admitted them.

Much stress has wisely been laid on the influence of beautiful surroundings, the presence of works of art, flowers, etc., in the school-room. They are valuable as aids, but if we rely on them alone for refinement, they will no more serve our purpose than the presence of ever so extensive an apparatus will of itself teach Natural Philosophy.

Another requisite I would place, even before good manners, in my competitive examination, is that of CLEANLINESS, which is as near godliness now as it ever was. Does the mention of such a thing shock you? Probably you have not seen, as I have, teachers come before their pupils with hands sadly in need of the Brown Windsor of which Dr. Holmes speaks, hair unkempt, linen or lace far from immaculate, and clothes which indicate a long absence of the brush. If, as some such claim, the outward is a type of the inward, there is an unclean spot somewhere in the mind or heart of that individual which unfits him or her to be the guide of youth. In calling attention to these needs, we by no means wish to depreciate the value of the more solid work. These are but the blossoms on the tree. It might serve all the purposes of a tree without them, but how much more lovely is it with them! A diamond is a diamond though in the rough, but its beauty is apparent only when polished.—*The School.*



## GEOGRAPHICAL NOTES.

UNITED STATES.—The one unpardonable piece of ignorance in an American school-boy is not to know the number of States and Territories in the Union. It must be confessed that this knowledge has been rendered somewhat difficult by the diplomacy of the past few years, and by the revival in the popular mind of what the Germans call *Erdgier*—or the thirst for annexation. We broke over the wholesome rule (for a republic) that contiguous territory alone should be added by way of enlargement, when we acquired Alaska of the Russians. The national honor (but no other consideration) required that we should break it again in the case of St. Thomas. Had the treaty for it with Denmark been carried through, it would, perhaps, have saved us from coveting San Domingo, and from all the scandal of an unauthorized attempt to gain possession of it by a *coup d'état*. For, let us remark in passing—what is by no means generally known—the most censurable feature of the whole transaction was that the President sent Gen. Babcock to San Domingo, ostensibly merely to survey the scene of the proposed bargain, after his Cabinet had, on the only occasion when he consulted them, pronounced emphatically against annexation; that on Gen. Babcock's return with a signed treaty for which he had pledged the President's support, and which had been negotiated entirely without the knowledge of the Department of State, the President made but a single allusion to it in Cabinet meeting, and being rebuffed dropped the subject and never afterwards introduced it; and that in spite of the known opposition of the Secretary of State, the measure was vigorously pressed upon the Senate by the members of the President's military family. But this by the way. San Domingo being too near, it would seem, a naval station in the South Pacific was the next desideratum, and a protectorate the means selected for obtaining it. The history of this manœuvre is not free from the obscurity which attended the last, but it also would appear to have been undertaken, at least in the first instance, by irresponsible persons without communication with the

State Department. At all events, what is known is, that a Mr. Stewart, President of the "Central Polynesia Land and Commercial Company," and William H. Webb, general manager of the Australian line of steamers, arranged a treaty securing to the United States the exclusive privilege of a naval station on the Island of Tutuila (one of the Navigator group), in return for our protection. The fifth clause is said to read as follows:

"We do acknowledge the absolute authority of the United States of America with regard to all matters whatsoever, and bind ourselves to adopt the common laws of America."

This agreement was signed by two rival kings, uncle and nephew (a minor)—the former a high chief of Savaii, the latter ruling over Upolu, who had been engaged in a desolating warfare upon each other—and by 120 chiefs, as well as the British and American consuls. Subsequently accepted at Washington, it was presented to the Senate for confirmation, and lobbied for by a Capt. Wakeman, who made use of some extraordinary arguments, such as this passage in regard to the women of the islands in question:

"They stand out in their beatific nudity and loveliness, the emblem of the great Master's handiwork in His happiest mood, a combination of beauty, grace and innocence, which no Christian can look upon without the deepest sentiments of love and admiration, both toward the Creator and the created."

It was further urged from the same quarter, that the Australian Company having been the means of bestowing this great benefit on the country, Congress could do no less than grant the subsidy for which it was at that moment a suppliant.

So ingenious a plan merited success, but we are unable to state whether the subsidy was voted, and even have historic doubts about the present ownership of the Samoan Islands. Nevertheless, whether American or native property, Tutuila will doubtless be used as an intermediate stopping-place by the Australian steamers, being in every respect conveniently situated on the direct route to Auckland and Sydney, and nearly enough equidistant between the Sandwich Islands and New Zealand (central long. 170° W., lat. 14° S.) There are two good ports on this island, that of Leone, at the S.W.

extremity, and (the best) Pago-Pago on the south side. It is a high and broken volcanic island, of some 240 square miles, and a population of 8,000. Savaii is the largest and westernmost of the group, containing 700 square miles, and 20,000 inhabitants. Concerning its interior very little is known, and American explorers have now a good opening to distinction. There are two other large islands, Manua, and Upolu (560 square miles, and 25,000 inhabitants); and five smaller ones: Rose, low and uninhabited except by birds, Oloosinga, Ofoo, Manono (a missionary station, population 1,100), and Apolima. The navigator (Samoan) Islands thus show a population of nearly 60,000, the natives ranking second among the Polynesians in physical and moral characteristics. They abound in tropical fruits—cocoa-nut, bread-fruit, bananas, yams, sweet-potatoes, pine-apples, coffee, sugar-cane, ginger—with plenty of ratan and bamboo. The group is encircled by one of the branches of the (W. to E.) south equatorial current. It was discovered in the middle of 1768, by Count de Bougainville, during his circumnavigation of the globe, the same who commanded with gallantry under Count de Grasse when his squadron was co-operating with the American forces against those of Great Britain (1781–82).

—A Ship Canal across the Peninsula of Florida is proposed. The route is up the St. John's River, 127 miles, then up the Ocklawaha River for 60 miles. To this point a ship canal for the distance of forty miles must be cut through the swamps to the Amaxara River, at a spot thirty-five miles from its mouth, where it empties into the Gulf of Mexico, near Cedar Keys. By this route 650 miles will be saved on the voyage between the mouth of the Mississippi and the Atlantic ports. As the trade of 1871 between the ports on the Gulf of Mexico and those on the Atlantic Coast amounted to 800,000 tons, it is believed that a handsome revenue would be derived from the proposed canal.

BRITISH AMERICA.—Captain Cameron is to be the surveyor of the boundary line between the United States and the Dominion of Canada through the lakes, forests and Rocky Mountains.

MEXICO.—Here is a fact which needs no comment. Mazatlan, on the west coast of Mexico, receives letters from Europe more quickly than from the capital itself. The courier from Mexico to Mazatlan is twenty-two days in making the trip, while Europe may be reached in twenty-one, via San Francisco and New York. The Mexicans have been for fifteen years endeavoring to build a railroad from Vera Cruz to the capital, working at both ends, but more than a third of it is yet undone. Such are some of the effects of bad government.

CENTRAL AMERICA.—The U. S. Exploring Expedition under Capt. Hatfield is examining three routes for an inter-oceanic canal, with good prospects of success.

SOUTH AMERICA.—There are 60,000 Italians in Buenos Ayres, forming, if we are not mistaken, the majority of the population. The number of French, however, is not inconsiderable. Add to these the Spanish of the Argentine Republic, the Portuguese of Brazil, and their German colonists in Rio Grande do Sul, and Dutch and English in Guiana, and we have a little Europe in the great continent to the south of us. The Spanish Academy at Madrid has invited the Spanish-American men of letters to co-operate in a movement to give unity and stability to their common tongue. A perfect Babel of idioms in the republics of South America renders such a task eminently necessary.

EUROPE.—The *Pomerania*, charged last year with the scientific exploration of the Baltic, began its voyages by passing from Stockholm to Gothland, and thence to the Russian coast, returning to make a new transit towards Memel, and thus traversing in three different directions the deepest part of the sea. The expedition next skirted the Southern coast as far as Holstein, sounding at every step, and determining temperatures and the directions of submarine currents. Nowhere was a greater depth found than 720 feet (German); from 600 to 720 the water was icy cold and adverse to vegetable life and to all but a few animal organisms, to which the brackishness is also fatal. Animal life, in fact, is found concentrated between the surface and a depth of 30 feet, while plants occur not lower than 60. West of Rügen the

languages of Central and South America. He spoke the dialects of Mexico and of Brazil. Among the few literary remains which he has left is a Mexican calendar, drawn up by himself, and illustrated by drawings from the pencil of one of his nieces, Signorina Minarelli. The catalogue of his library contains several books not only in Mexican, Brazilian, Peruvian and Chilian, but even in one of the languages of North America—that of the Delaware Indians.<sup>1</sup>

Herr Gorres, on his own part, attests the fluency, the precision, and the unexceptionable accent with which the Cardinal spoke German; and he tells, as a curious example of the accuracy of his knowledge of other languages, that a Russian lady of his acquaintance, who had written in Russian to introduce a friend to Mezzofanti, was rallied by him afterwards on the ungrammatical and inelegant style in which she had written, and was forced to acknowledge the particular faults in her composition, which he had pointed out. We, ourselves, remember to have heard the highest testimony to the accuracy and elegance of a letter of his in Portuguese, addressed to the Portuguese ambassador. It was perfect, he declared, even to the nicest conventionalities of the epistolary form in use in Portuguese society.

We shall return hereafter to some of the details of Gorres' account; but, in the meanwhile, we shall add another of Mr. Watts's authorities, an anonymous Russian traveler, who visited Rome a few years later:

"Twice," writes this traveler, "I have visited this remarkable man, a phenomenon as yet unparalleled in the literary world, and one that will scarcely be repeated unless the gift of tongues be given anew, as at the dawn of Christianity. Cardinal Mezzofanti spoke eight languages fluently in my presence: he expressed himself in Russian very purely and correctly; but as he is more accustomed to the style of books than that of ordinary discourse, it is necessary to use the language of books in talking with him for the conversation to flow freely. His passion for acquiring languages is so great, that even now, in advanced age, he continues to study fresh dialects. He learned Chinese not long

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1 See *Catalogo della Libreria del Card. Mezzofanti*, p. 25.

ago ; and is constantly visiting the Propaganda for practice in conversation with its pupils of all sorts of races. I asked him to give me a list of all the languages and dialects in which he was able to express himself, and he sent me the name of God, written in his own hand, in fifty-six languages, of which thirty were European, not counting their subdivision of dialects ; seventeen Asiatic, also, without reckoning dialects ; five African, and four American. In his person, the confusion that arose at the building of Babel is annihilated, and all nations, according to the sublime expression of Scripture, are again of one tongue. Will posterity ever see anything similar ? Mezzofanti is one of the most wonderful curiosities of Rome."

We have seen that one of the chief opportunities for extending and improving his gift of tongues, which Mezzofanti enjoyed at Rome, was his easy and constant access to the living polyglot, the college of the Propaganda. Nowhere, perhaps, in the world is the diversity of tongues so strikingly exhibited as at the annual academical exercises of this celebrated institution, which are held during the octave of the Epiphany, the special festival of the Propaganda. These exercises consist of declamations, both of prose and of poetry, in each of the languages which are represented among the students actually in the college, and which frequently exceed forty in number. On these occasions, Mezzofanti used to be the life of the assemblage. Miss Mitford has given an interesting account of this performance, derived from the late Roman Catholic Bishop Baines.

"He (Dr. Baines) gave a most amusing account of Cardinal Mezzofanti—a man, in all but his marvellous gift of tongues, as simple as an infant. 'The last time I was in Rome,' said he, 'we went together to the Propaganda, and heard speeches delivered in thirty-five or thirty-six languages, by converts of various nations. Amongst them were natives of no less than three tribes of Tartars, each talking his own dialect. They did not understand each other, but the Cardinal understood them all, and could tell with critical nicety the points in which one jargon differed from the others. We dined together, and I entreated him,

having been in the tower of Babel all the morning, to let us stick to English for the rest of the day. Accordingly, he did stick to English, which he spoke as fluently as we do, and with the same accuracy, not only of grammar, but of idiom. His only trip was in saying, 'That was before the time when I remember,' instead of, 'before my time.' Once, too, I thought him mistaken in the pronunciation of a word. But when I returned to England (continued Dr. Baines) I found that my way was either provincial or old-fashioned, and that I was wrong and he was right.

" 'In the course of the evening, his servant brought a Welsh Bible which had been left for him. 'Ah!' said he, 'this is the very thing; I wanted to learn Welsh.' Then he remembered it was in all probability not the authorized version. 'Never mind,' he said, 'I think it won't do me any harm.' Six weeks after, I met the Cardinal and asked him how he got on with his Welsh. 'Oh!' replied he, 'I know it now; I have done with it.'"<sup>1</sup>—[*Miss Mitford's Recollections of a Literary Life*, vol. ii. p. 203.

It was not, however, in the mere capacity of a spectator, or even of a patron, that Mezzofanti was known in connection with the exercises of the Propaganda. It was notorious in Rome that he took an active and good-natured part in the revision, and perhaps even the actual preparation, of the compositions intended for delivery. "He was frequently himself," writes Guido Gorres, "the author of these polyglot poems; and there can be no doubt that there never was a poet who essayed his skill in such a variety of tongues. A disinterested act of good nature, truly, for in most cases, with the exception of himself and the individual who is reciting, there is not a soul in the assembly who can understand a word of it, much less appreciate the poetical merit of the composition." We can ourselves bear testimony to the truth of Gorres' statement. The declamations in the Tamil dialect of Hindostanee, recited year after year by an

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| <i>Dow, Jr.</i>                                            | <i>Longfellow.</i>                   |
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| <i>Hood.</i>                                               | <i>Robert Browning.</i>              |
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| <i>F. W. Gillett.</i>                                      | <i>Longfellow.</i>                   |
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# AMERICAN EDUCATIONAL MONTHLY.

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SEPTEMBER, 1872.

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## SHALL OUR GIRLS GO TO COLLEGE?

“IT is a somewhat mournful thing,” says Bishop Clarke in an article on “Our Colleges,” in the *Christian Union*, “to take up a nicely printed and delicately tinted college catalogue, and in the beginning see a long list of trustees and fellows and professors and tutors, and in the end the outline of an elaborate four years’ course of study, with prizes and honors and scholarships and terms of expense and rules for entering; and then between them to see one page for seniors, another for sophomores, and another for freshmen, none of them filled; and then, turning to the summary, to read: Total, thirty-three; five on the partial course, and absent with leave, four.

“This college must have buildings and books, and apparatus and endowments; it may have able and learned men in the faculty; but dreary and forlorn must it be for such accomplished gentlemen to expend themselves day after day and year after year upon a class of eight or ten students, when it would require no greater labor to instruct fifty or one hundred, not to speak of the higher stimulus imparted to the teacher by the increased number of the pupils.”

I think it also a mournful thing that all about these col-

leges, within a radius of a few miles, may be found young people who would be willing to pawn part of their lives for the very advantages these schools afford, and in vain.

It has been recommended that these scattered colleges be gathered up and made into a few grand universities—as if it were any easy thing to draw up by the roots one of these established institutions with its “long list of trustees and fellows and tutors,” even with only a handful of students to be registered in its “tinted” catalogue. It is as if we were advised to tear down the village church and transport it to the neighboring city, where there are so many churches, and where so many people attend divine service.

But we need all these schools. The world is not too full of culture. Have we too many accomplished teachers for all those who need to learn? If there is much power running to waste, there is also a great want in the world that such power alone can supply. Light in the light-house, but ships wrecked on rocky shores because the light is hidden when ships of a certain line go by. Let it not be said that all has been done that can be done to utilize this educational power, so long as only a few of the universities have invited the girls to come in. Half the rising generation persistently excluded from our best schools! Our best schools (and none of them too good!) ignoring the fact that the world is calling for better teachers, better *primary* teachers, better mothers, more self-poised and consistent women, and letting their wisdom run to waste rather than bestow it upon the girls!

I always grow indignant when I think of this. I want to ask the fathers of this land what they have been thinking about these long years—how it has come to pass that while the mothers have nursed the boys and the girls in their childhood, the one class as tenderly as the other; they, the fathers, have not made equally good provision for both classes when they come to need the outside training of the schools. I remember, however, how our good things have come to us, one by one, first to the few, then to the many, fruits of the gradual growth of civilization, and not the result of any deep laid plot or plan on the part of mankind, or any portion of mankind; and I try to be grateful for what

we have—to make the best of it, and to look forward hopefully to the future and the millennium.

There are in the United States, according to Bishop Clarke, 368 colleges with an average of 135 students to each one. Some of these colleges are probably a great deal better than others, and some of them may not be worthy of the name; nevertheless, such as they are, they are our best institutions of learning. The best culture and wisdom of the land is found among their boards of education, the best appliances for instruction, the largest facilities that money can furnish are found in their recitation rooms; and the fact that these rooms are only half filled with students, when there are those in the world who ought to be students, and who would be if they might, ought, it seems to me, to settle this matter of "Female Education" at once. The objections to the rational plan of bringing in the girls to fill up these vacant seats in our universities have been gravely stated by our learned men, and as gravely discussed as ever the savans of ancient times discussed the "number of grains of corn in a heap," and plain people have listened until they have been so lost in the mazes of their logic, that they have come to doubt that two and two make four, or that girls should be educated at all. The objections fairly stated are the best arguments in favor of the plan.

For example:—"A woman may not be strong enough to take a college course of study." Strong enough to take both Adam's and Eve's share of the curse, to gain her bread by the sweat of her brow, and endure besides all the anguish that a woman only can endure and live; and serious men doubt that she may be able to undergo a little decent preparation for the work of life, which work, with or without the preparation, she must meet.

Then there are the "proprieties." Young men and women may meet in the social circle, in the dance, at conference meetings and on the public promenade, and talk on any subject they choose; but they may not stand up in the same class-room and talk about the laws of God manifested in nature, or listen together to what our wisest thinkers have to tell them about these things. Should they do so, they might outgrow some of the small talk prevalent in so-

ciety ; they might, besides, have opportunities to find out something more about the real mind and character of their (to-be) life-long companion than it were possible by gaslight. To be consistent in the "proprieties" we should turn Turks at once.

The matter of mixed boarding-houses is entirely separate from mixed schools, and ought not to be considered as among the preliminaries of how it is best to be done, after the thing to be done is decided, and need not necessarily be considered at all.

But the *Independent*, and a few pioneer journals that make it a business to clear up the roads a little in advance of civilization, tell us that this matter ought to be considered settled ; that the wise men of the west have taken counsel of the Mikados of the east, and Cornell University and the University of Michigan have said to the girls : "Enter, if you will." Will they ? A few of them, yes. But if Yale, Harvard, Amherst, and all the rest should open their doors to-morrow, the girls would still find barriers enough to keep out all but the most enthusiastic, the most conscientious, or those who have the wisest and most thoughtful parents.

It was only last year that the mothers of the boys at Amherst sent a petition to the trustees of that institution praying that their doors might not be opened to young women. Perhaps such action on their part might have been expected. It is a notorious fact that a free High School is opposed by the very class which needs it most ; viz., the poor who have no taxes to pay and many children to send. Every high-minded community keeps it up, however, and pays the taxes and urges the poor parents to send their children in.

Suppose our Puritan Fathers when they founded a church in the wilderness, and established by its side a school for their sons of the very best material they had, had at the same time established it for their daughters and made it as necessary for them to reap its advantages, would there not have been a difference to-day in the views of the mothers in regard to the education of their daughters ? One at a time our blessings come. Our Puritan Fathers saw some things clearly, but both their eyes had not been opened, else would

the mothers of to-day be blest with a clearer vision. As it is, there must be time to create a public sentiment in favor of educated women.

Educated *teachers* are at a premium now. Mothers and fathers begin to find that it "pays" to send to school the girls who may have to earn a livelihood; and marrying, men begin to question if a knowledge of arithmetic would not be a good thing in a housekeeper, and if some of the simplest laws of philosophy, chemistry and physiology might not make a difference in their domestic comfort as well as in the bills of the family physician. I have little sympathy with all this; yet I know that the American Revolution might never have taken place if it had not been for the tax on tea. So near the pocket lies the soul!

The need of good primary teachers cannot be over estimated. Dr. Holland has been saying all the winter in his popular lecture, "The Undertow," that he thinks it would be better to throw away the grown-up generation of sinners, and spend the time and talent of the world in trying to educate rightly the tender little ones. With regard to the importance of proper culture for children he is certainly right. I think it would be better that the learned and accomplished gentlemen of the university, if they may not add to their class of eight or ten students, the eighteen or twenty young women who are to be the future primary teachers of their town, should give it up altogether and go themselves into the crowded public schools and bestow the weight of their wisdom on the lever that lifts the foundations of both social and individual life.

We need educated mothers no doubt. She must be something more than human who can govern, guide, teach, be a helpmeet to her husband, look well to the ways of her household, and train up her children in the right way, by instinct. A mother, of all mankind, should be strong, self-reliant, far seeing, logical, intelligent. She must have every faculty under control, developed to its utmost power, and in perfect working order. We have only to open our eyes to see all around us the sad results of weakness and incompetency in the feminine head of the household.

And yet I would not urge our young women to make the

best of their time and talents in order to become good primary teachers, or even good wives, or the best of mothers. I think there is a better ambition, and one that should sway every feminine mind, *vis.*, to be a woman worthy of her creation,—for she, we are apt to forget when appointing spheres and vocations, was made in the image of God and invested with the dignity and responsibility of choice.

There seems to be a tendency in this practical, i. e., money-making age, to educate our children for trades and professions, (speaking of girls, we say "spheres") as if "getting on" were the primary object of life. Once, in *Harper's Monthly*, I saw a semi-comic sketch of the way things might be done in the next century, allowing this *practical* tendency to be fully carried out. There was a blacksmith, for instance, who, by a process of gymnastics, begun in early childhood, had had his arms, shoulders and chest remarkably developed, while his head and legs were scarcely anything. An editor was all head with only one arm and just fingers enough to hold a pen, while a jeweller had nothing in the way of corporosity, but one piercing eye and a pair of skilled hands. There are, I believe, such mental monstrosities in the world to-day. I do not think their existence should be justified by the theories of our literary men, by the advice of those who make it their business to think.

I find in the EDUCATIONAL MONTHLY for March and April, an article which has been copied into other school journals, on Female Education, characterized by this sentiment. The writer of that article believes that the "proper and efficient education of girls affects, to a great extent, the national well-being." He finds this education not only "woefully neglected," but "utterly unfitted to the duties and circumstances of life;" and, he prescribes what? Instruction in the art of needlework and cooking, and other feminine occupations; the *elementary* laws of physiology, natural history and botany, added to geography, history and arithmetic; every thing, in short, that would be needed in a mother, housekeeper, or primary teacher; and thinks by the time a girl were sixteen or seventeen years of age, she would be in a position that, come what would, she would be prepared for it. Shall we never have done with

such nonsense? I beg "G. R. C.'s" pardon, but I believe that it is just such talk as this from our educational authorities that is responsible for the state of things in the feminine educational world which "G. R. C." deplures. Why should we, contrary to the best theories of education, determine *a priori* a girl's sphere, and then try to train her for it? It is the province of education, says Herbert Spencer, "quietly to unfold one's own individualities to the full in all directions."

Mr. Carlisle reiterates that it is the business of the university to teach a man how to read and how to learn. It is not, he insists, the function of such a place to offer particular and technical knowledge, but to "prepare a man for mastering any science by teaching him the method of all." According to our wisest thinkers, it is the province of the schools to give one accuracy, discrimination, judgment, the power to do one's own work in the best way. And we want for our girls an education that shall unfold the individualities of each one to the full, teach each one to find out her own vocation, and give her power to perform its duties wisely and well. It is for this that we need the best training the world can give, the best schools and the highest incentives to enter these schools, a public sentiment in favor of educated women; and, more than all, a consciousness on the part of woman that all grand truths and principles are meant for her, and good for her. I am tired of this picking to pieces of God's truth, scattering separate bits here and there, as if there were not enough for all. "Get wisdom," seems to belong to men; "Love thy neighbor," to women. I am tired, too, of the modern feminine ideal. Frail and delicate flowers are the favorite emblems; helpless, clinging vines are the models; and ignorance, and meekness, and dependence are taught to the girls as prime graces; and it is as much the fault of society as of the fashionable school that their education has become not only a sham but a lie. I hope I am making myself understood. I believe that one grand reason why there has not been more suitable provision made for the mental development of our girls, is the theory, openly avowed and defended by our religious men and by our professional thinkers, that the sphere of woman is

only wifehood and motherhood, and that whatever has been supposed to fit or unfit her for that vocation, has been made the test of value or worthlessness in her training. As we have advanced in civilization it has been shown that intelligent mothers could do better work than ignorant ones; so, gradually, as this idea has grown, the privileges of study have been opened to woman. Good has come out of evil, but it is time for us to speak the truth when we know it. It is not the chief end of man to propagate the species. The "Assembly's Shorter Catechism" was nearer the truth. The Christian religion teaches a better doctrine, and one more consistent with our ideas of God. I know that ignorance and drunkenness and slavery, the divine right of kings, and the denial of free speech, have all been proved right by the Bible; but I hold to that glorious book of principles yet; and in the face of all the divines, learned in the lore of theological seminaries,—and I highly respect them too,—I dare insist that the "virtuous woman" described in the Proverbs is a better model than many of the men of the pulpit hold up before us to-day; that strength and honor and wisdom are as good for a woman in the nineteenth century, as in the old-fashioned time of the "wise man." I protest against the talk of spheres and vocations. I wish that every woman might be conscious of her right to decide her own "sphere;" I wish the world would cease its meddling in that direction, and help her, instead, through its best schools to understanding, accuracy, judgment, so that she may decide wisely for herself. I wish, finally, that the girls might be sent to college, as Edward Everett Hale says the boys are, "to lay a foundation on which, when the time comes, they may build such an edifice as the good God may order."

F. K. KILE.

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SIR PHILIP SIDNEY left this as his last farewell among his acquaintance:—"Govern your will and affections by the will and word of your Creator: in me behold the end of this world, and all its vanities."



*P A P E R .*

**I**F a casual observer of a stone arch were asked which is the most important stone in the whole arch, he would doubtless reply that it was the keystone, since that kept all the others in their places. If a pretty well-informed person were asked which one of all the products of human skill has been of the greatest service to mankind, he might very truly reply, paper; for it combines for man's use, two distinct kingdoms, the material and the immaterial. Paper is the great means whereby thought is diffused among men, accumulated for present or future use, and preserved for all time. While there is a seeming truth in the above statements, there is also a little falsehood. No one thing in life is most important. Each thing depends upon some other, and thus brings all events and all things alike into a sort of chain. The keystone is useless if there be no foundation; paper is useless if there be no ink. There can, of course, be no question of the great importance of paper as a means of diffusing knowledge, awakening thought, calling forth invention, and civilizing the world. It is the handmaid of all arts, of all sciences, and of all trades.

The first German paper-mill, of which we have any account, was established at Nuremberg, in the year 1390. The first English paper-mill mentioned is as late as the year 1496. In the year 1728, the Assembly of Massachusetts Bay passed an act to encourage the manufacture of paper. The report of the Board of Trade for the year 1731 states that a paper-mill was set up there three years before; showing that Massachusetts was pioneer in this great work. In the year 1732, there was a paper-mill started in the vicinity of Philadelphia. These were the seeds from which our present immense paper manufacture has grown. At the outset there was very little demand for the products of these mills, and but little opportunity for them to extend their operations, as there was an act of Parliament prohibiting the manufacture of any other paper in the Colonies than that used by clothiers for press-boards. It was not until the breaking-out of the Revolutionary War that any con-

siderable demand arose in the colonies for home manufacture. A Mr. Wilcox, the owner of the mill at Philadelphia, made the paper for the Continental money, and also ventured to commence, for the first time in the States, the manufacture of writing-paper. The U. S. Government, during its early years, did what it could to encourage the manufacture of paper, by making rags free; and within ten years after the close of the war for Independence, there were no less than forty-eight paper-mills reported in the State of Pennsylvania alone.

Perseverance, in all useful pursuits, is sure in the end to triumph; and the United States now manufacture twice as much paper as France, almost, if not quite, as much as Great Britain, and consume about three times as much per head as the French people, and more than twice as much as those of Great Britain.

The cotton and linen fibres are found most serviceable in the manufacture of most kinds of paper. Still there are a great many kinds of vegetable matters that have been made into paper more or less valuable, such as the bark of the aspen, beech, hawthorn, lime, mulberry, and willow. Paper has been made, too, from down of the asclepias, catkins of poplar, tendrils of the vine: from straw, husks of corn, cabbage-stalks, the shavings of wood, and sawdust; and from a variety of other plants too numerous to mention.

Rags of cotton and linen fabrics must, however, be the principal source for most of the firmer kinds of paper, both on account of durability and cheapness. New cotton will make an excellent article of paper, but ordinarily the price is too high to render it serviceable. After the great financial crisis of 1837, cotton was so low in market that large quantities of it were manufactured directly into paper; but it will be a long time before that state of things will again occur. The constant improvements in machinery for the manufacture of cotton and linen fabrics makes wearing apparel so cheap that much larger quantities of rags can now be obtained than formerly. Still, the increase of knowledge ought to keep pace with the increase of natural comforts; and if it does, there will necessarily be a proportionate increase in the demand for printed matter, so that there is but little

danger of a superabundance of material for paper-making. The world is not yet half supplied with reading matter, so that the cheaper the means for the diffusion of knowledge become, the wider will be the field of the publisher. New discoveries in the art of bleaching, and new improvements in machinery for preparing pulp and perfecting the paper, have rendered the art of paper-making comparatively easy now to what it was when all the finer grades were made by hand. Rags, whether coarse or fine, can now be reduced to a very fine soft pulp; while the most vile-looking materials are made to yield to the bleacher's subtile power, and assume the purity of freshly fallen snow. A short time previous to the middle of the present century, the application of chlorine gas, of chloride of lime, and of lime and soda-ash, for bleaching and cleansing, opened up a new field of paper material. Heretofore, calicoes, cotton waste, hemp-bagging, worn-out sails, and tarred rope, were only made into coarse wrapping paper. Now these materials are made into newspaper and various kinds of coarse printing paper; and in some cases even into very fine printing and letter paper. Old worn-out cable rope makes a beautiful paper, while hemp, such as is seen in coarse heavy bags, serves to give strength, and enters largely into newspaper manufacture, where strength is desired; a desideratum not much accounted of in some of our leading daily and weekly papers.

The average quality of paper manufactured by any nation is a fair index of the skill, or degree of civilization of the people. In a low state of civilization, the manufacture of wearing-apparel will likely be rude, and for the most part of coarse material; as a consequence, the worn-out garments, the rags which determine the quality of paper, will be coarse, and no doubt very closely worn. The filthiness of rags is not so great an objection as coarseness or overwear; for skill and soap, and bleaching agents, can, in time, secure purity. Paper made entirely of linen is no more serviceable than if partly made of cotton, provided the cotton be not more than 50 to 70 per cent. of the whole. The manufacturers of paper manifest great skill in the selection and arrangement of materials, as, for instance, in the assort-

ing of rags at the mills. It is found in practice, that, if different qualities of rags are ground by the same engine at the same time, the finest and best portions are reduced to pulp and carried off, while the coarser portions are but partially reduced. There are usually five different grades, numbered 1, 2, 3, 4 and 5. No. 1 is superfine linen, used for the finest and choicest writing paper, such as only very fastidious people, or perhaps persons in love, ever care to use. Few of our elegant people think when they see the *chiffonniers* around with bag and crook, diving into all sorts of filth and garbage, that they may fish out something which by and by, in the shape of an affectionate missive, will decide their fate for better or for worse. There is often only a paper wall between the high and the low, the rich and the poor; but they, like the materials under consideration, during the process of preparation, must be kept separate. After the different grades are all thoroughly reduced to pulp, they can be mixed in such proportions as the maker desires. The best manufacturers in the assorting of the rags for pulp, keep articles of hemp, flax, tow, and cotton, carefully separated; the coarse yarn is kept apart from the fine; hems and seams are likewise kept separated, while the different degrees of wear must also be carefully observed, as rags very much worn have not sufficient strength for any of the ordinary papers of commerce. Besides, if the strong and the much worn are mixed in the process of reducing, the pulp will have a cloudy appearance, owing to some parts being reduced finer than others, and the result would be an uneven, wavy sort of paper. Since the discovery of a method of separating ink from printed paper, old newspapers and old books have entered largely into the paper-makers' trade. It is a lesson of economy that our American people need to learn—that is, to save for market their waste paper, instead of kindling fires with it, and casting it to the winds; but as newspapers and magazines are furnished now at about the cost of paper and ink, most people think they can afford to burn what might be put to more useful and nobler purposes.

The newspaper service of the United States requires not less than 200,000,000 pounds of paper per annum. Very

little of this ever finds its way back to the manufacturers. Old paper sometimes brings 8 cents per pound; but at 5 cents per pound there is a waste of \$10,000,000 that might be saved. Magazines and periodicals will doubtless double this amount. Let frugal housewives take a hint, and add these wasted millions to the greatest civilizing agent of the present day.—*The Technologist*.

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### GEOGRAPHICAL NOTES.

UNITED STATES.—A letter from the Powell Expedition, dated April 5, appears in the *Chicago Tribune* of July 11. The camp was then at "Windsor Castle," Utah Territory, a Mormon fort at the crossing of the Colorado where the Pahria River empties into it, and "on the direct trail from the Indian country to the settlement of Pipe Springs." The Expedition has yet, beside some minor excursions, to make the descent of the Grand Cañon, before setting out on its return in November. Thus far, says the writer:

"Fourteen hundred miles of tortuous and almost inaccessible rivers have been mapped by the civil engineers. A continuous sketch of the left wall of the Colorado and Green has been made by Dellenbaugh. Nearly 1,000 stereoscopic views have been obtained. Many can never be duplicated; most are pictures of scenery as grand as the Yosemite, as wonderful as the Yellowstone, and less known than either. A book will be written explaining the views. An accurate survey will soon be completed of the Valley of the Colorado and tributary streams. The Base-Line, three miles from the Utah and Arizona boundary, will form the basis of future section, county, and State surveys."

Besides this, the mineral wealth of the region, in silver, copper, gold, and coal, has been revealed, and already a throng of miners are pressing from all parts towards the cañons, particularly Grand Cañon, in search of gold. Palæontology, botany, and archæology, have also received the attention of the Expedition, and Major Powell has made some linguistic studies which promise interesting results for both comparative mythology and philology.

—The Yellowstone Expedition, under Dr. F. V. Hayden, is exploring the mining region about Helena, Montana; and a party of it, under Mr. James Stevenson, the Snake River Valley to its source near the Yellowstone Lake.

SOUTH AMERICA.—In Walsh's "Notices of Brazil," published about the year 1830, may be found the following amusing account of Brazilian ignorance at that time (vol. ii, p. 61, of Boston ed. of 1831):

"The Brazilians, in general, cannot go farther back in their calculations of time than the arrival of the royal family, the great epoch in their history, and which they have some confused notion was coeval with the creation or the flood. Their notions of geography are not much more enlarged. Most of the inhabitants of the interior of Brazil had wonderfully simplified the science of geographical and political statistics, by acknowledging only two grand divisions of the globe; one being America, the other Portugal and its dependencies. They have indeed some indistinct idea that there are such places as England, France, etc., but these countries were vassals of Portugal.....

"On one of these occasions, Napoleon was the theme of conversation. His military exploits had been heard of; 'but was he not,' inquired one of the party, 'a general in the Portuguese service, who rebelled against our king?'

"The old vigario, having been in Europe in his youth, thought himself of course, and was considered, a man of superior knowledge and learning to all around him, and as such he would generally take a dictatorial share in these conversations, casting occasionally at our countrymen a glance accompanied by a significant shrug of the shoulders, expressive of pity at the ignorance of his parishioners. England being one day talked of, the old gentleman expatiated on the beauty, civilization, and greatness of our country, of which he had had most correct information during his residence in Portugal; and to give an idea of its extent, he wound up by saying that, of its many rivers, one called the Mississippi was so large that the eye could not compass its width!"

However, the English traveler can tell a tale of his own countrymen which shows that geography has not always been a strong point with them either. He is speaking (vol. I, p. 245) of the opening of Brazil to foreign enterprise:

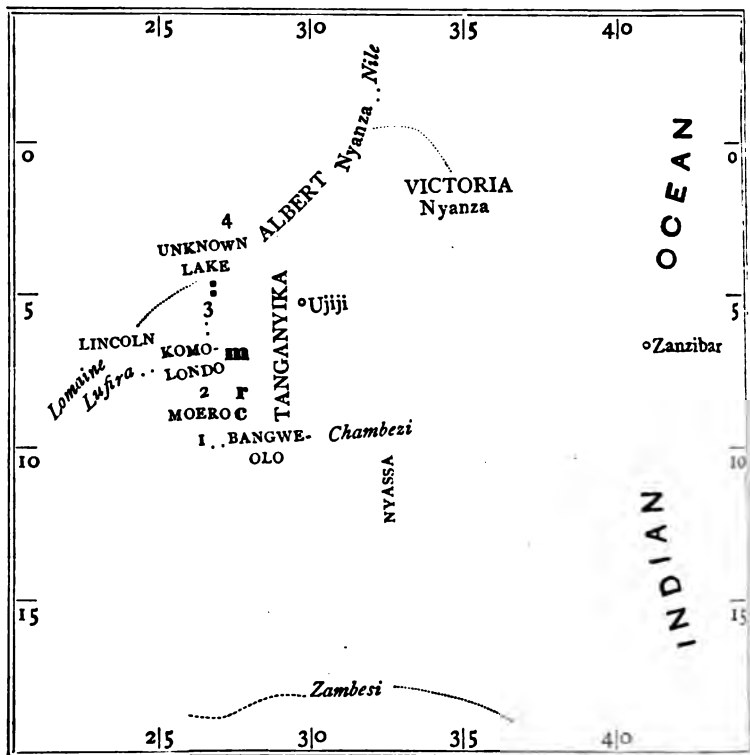
"Such was the avidity of speculation in England that everything was sent to Brazil, without the smallest regard to its fitness or adaptation to the climate or wants of the people who were to purchase

them. The shops and ware-rooms of Fleet-street and Cheapside were ransacked and swept ; and the consideration was not what should be sent, but how soon it should arrive.....

"Among this ingenious selection was a large supply of woollen blankets, warming-pans to heat them, and, to complete the climax of absurdity, skates to enable the Brazilians to enjoy wholesome exercise on the ice, in a region where a particle of frost or a flake of snow was never seen. However wasteful and ridiculous this may seem, these incongruous articles were not lost in a new country, where necessity and ingenuity could apply things to a use for which they were never intended by the sage exporters. The people did not suffocate themselves with woollen coverlets, where they sometimes found a cotton sheet too heavy and warm ; they did not lay the blankets, therefore, on their own beds, but in the beds of their auriferous rivers and lavas, or gold washings. Here the long elastic wool entangled and intercepted the grains of gold that came down, till they became saturated, and so literally converted the blanket into a golden fleece. They had formerly used hides with the hair on for the same purpose, and when the supply of blankets was exhausted, they returned to hides again. In the same way they applied the warming-pans to the uses of their engenhos, or sugar-houses : they knocked off the lids, and the bottoms made excellent skimmers to collect the scum on the surface of the boiling sugar. Even the apparently hopeless and inconvertible skate was turned to a useful purpose. Then, as well as now, there was nothing in the country so scarce as wrought iron for shoeing mules and horses ; and though ferradours, or smiths, are to be met at every rancho, ferraduras, or shoes, are seldom to be had. When the people, therefore, found they could not use these contrivances on their own, they applied them to their horses' feet ; and many an animal has actually traveled on English skates from Rio to Villa Rica. Such of them as were of well-tempered steel were hammered into facas, or knives ; and a gentleman told me he found the iron of a skate, in its original shape, forming the latch of a door in a village in the interior."

AFRICA.—Stanley's letter announcing the success of his expedition has been speedily followed by two letters from Dr. Livingstone himself to the editor of the *Herald*, thanking him in proper terms for the great service rendered, and stating, a little more definitely than Mr. Stanley, what has been the extent of his discoveries and what he purposes further to explore. These letters were telegraphed from London, and appeared in the *Herald* of July 26 and 27, together with a rude map, not over-correct. We offer here a still ruder one, which shows, however, approximately the

## THE LAKE DISTRICT OF EQUATORIAL AFRICA.



EXPLANATION—Rivers in *Italics*, Lakes in CAPITALS. 1. *Luapula* River; 2. *Lualaba* River; 3. nameless river, continuing the (Nile) drainage; 4. unexplored connection of foregoing water-system with the Nile.

**m**—Manyema, a cannibal country.

**r**—Rua.

**c**—Cazembe's territory.

succession of rivers and lakes which, there is every reason to believe, forms part of the Nile system, and which may be briefly summarized as follows: Latitude 11° S., the Chambezi river flows in a generally westerly direction into Lake Bangweolo (equal in superficial area to Tanganyika, which lies to the north of it,) emerges with a northwesterly course as the Luapula, passes into Lake Moeroc and emerges as the Lualaba, passes into Lake Komolondo, emerges without a name and passes into an unknown lake (lat. 4° S.,) which may be the southwestern extremity of Albert Nyanza, or,



if distinct, probably joins it by a final river link indicated on our map by the figure 4. West of Komolondo lies Lake Lincoln, which joins the outlet of the former at some distance to the north. The watershed containing this wonderful drainage is thus described by Livingstone :

“ It is a broad belt of tree-covered upland, some seven hundred miles in length from west to east. The general altitude is between four thousand and five thousand feet above the sea, and mountains stand on it, at various points, which are between six thousand and seven thousand feet above the ocean level. On this watershed springs arise which are well nigh innumerable ; that is, it would take half a man's life to count them. These springs join each other and form brooks, which again converge and become rivers, or say streams of twenty, forty, or eighty yards, that never dry. All flow towards the centre of an immense valley, which I believe to be the Valley of the Nile.

“ We have two fountains on (probably) the seventh hundred-miles of the watershed, and giving rise to the two rivers, the Loambai or the Upper Zambezi, and the Kafne, which flow into inner Ethiopia ; and two fountains are reported to rise in the same quarter, and, forming Lufira and Lomaine, flow as we have seen to the north. These four full-grown, gushing fountains, rising so near each other and giving origin to four large rivers, answer in a certain degree to the description given of the unfathomable fountains of the Nile by the Secretary of Minerva, in the city of Sais, in Egypt, to the father of all travelers, Herodotus.”

It is this fountain-breeding earth-mound which Livingstone is anxious first to visit, before even he undertakes to connect his Unknown Lake with the Albert Nyanza. In his second letter to the *Herald*, written with his characteristic Scotch raciness, he has a good deal to say about the slave-trade which he has everywhere encountered, and he has very high praise for the Manyema, who he says have “ but little of what we think distinctive of the negro about them.” Their great chief, Msama, who lives west of the south end of Tanganyika, resembled exactly the ancient Assyrians sculptured on the Nineveh marbles.

**NORTH POLE.**—Before the hot weather passes entirely, it will be well to refresh ourselves with a survey of the expeditions which make the present year remarkable in the annals of North Polar exploration. Of M. Octave Pavy's Franco-American expedition to the open polar sea *via* Behring's Straits, we have already spoken (MONTHLY for April). This

courageous traveler started out in May from San Francisco, his first point being Petropaulovski in Kamchatka, where he prepares his amphibious equipment and proceeds to Wrangell's Land (70 to 100 miles N. of Cape Yakan in Siberia), the true beginning of his exploration. Capt. Thomas Long, who discovered Wrangell's Land in 1867, has written a letter approving M. Pavy's general course as one which he himself recommended five years ago. He doubts if M. Pavy will be able to pass through the channels between Spitzbergen and Greenland, or between Nova Zembla and Spitzbergen, as they have always been found blocked with ice; nor to reach the Atlantic with his raft. He believes that a vessel properly fitted for the purpose, could make the passage from Behring's Straits to the Atlantic in a year. Of Capt. Hall and the *Polaris* the only intelligence that has been received has not gone unchallenged as to its authenticity. A letter from St. Pierre, Newfoundland, to the N. Y. *Times*, written April 15, tells of the arrival of the Danish brig *Meerbek*, from Disko, Greenland (lat. 70° N.), March 1. At the time of leaving, the *Polaris* had been two days at that port repairing a leak caused by the ice on the afternoon of Feb. 8. The report goes on to say that Capt. Hall had encountered many evidences of "a genial atmosphere and open seas in the extreme and undiscovered North"—such as plants indigenous to southern climates detected in the ice a floating limb of some huge birch tree, and a whale taken with a harpoon in him similar to those used in the South Pacific. We mentioned also in the MONTHLY for April, the expedition of Prof. Nordenskjöld, of Stockholm, whose objective point is Spitzbergen. Here he will spend the autumn, exploring the sea to the east of Spitzbergen, and making a map of the eastern end of the island. Part of his company will then return to Sweden, while he with about twenty others will winter in a house brought with them for that purpose, on one of the Seven Islands, lat. 80° 38' N., and pass their time in meteorological and magnetic observations, pendulum experiments to determine the flatness of the earth at the poles, and various investigations in natural history. In the latter part of the winter, and in the spring of 1873, an attempt will be made with reindeer and sledges

to reach the North Pole. Prof. Nordenskjöld is only 40 years of age, but this will be his sixth Arctic voyage. He is a Finn by birth, and if he has that command over the powers of the sea which the superstition of sailors attributes to his countrymen, great things may be expected of him. Greater store is set, however, by the Austrian Expedition (also under Government patronage) of Lieutenants Weyprecht and Payer, which sailed from Bremen, June 13. They were members of the Koldeway expedition of 1870, and navigated freely to the east of Spitzbergen, as far as lat.  $78^{\circ} 40'$  N., where an open sea still stretched before them (in September, 1871). This basin between Spitzbergen and Nova Zembla they will explore completely, and winter either in the Gulf of Timour or near Cape Cevero Vostocknoi (Cheljuskin), lat.  $77^{\circ} 30'$ . The next year will be occupied with the water between this cape and the islands of New Siberia; the third year with that between these islands and Behring's Straits. The polar region, therefore, for the next few years will hardly be more lonely for the explorer than Central Africa.

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*Cartography*.—No. 38 of the *Journal* of the Berlin Geographical Society contains a valuable map of the South Polar region, both physical and geographical. Mr. Edward Whymper has a paper in *Nature* of July 11, on Alpine Maps, which will bear reading throughout. We extract the following intelligence for the benefit of our higher institutions of learning. A map of Switzerland on a scale of 1:500,000, in four sheets, may be bought for ten francs. The *Carte Dufour*, of which it is a reduction, and which is one of the most beautiful maps ever made, on a scale of 1:100,000, in 25 sheets, is procurable for 40 francs; and a new Government map is in progress, scale of 1:500,000 and 1:1,000,000, in 546 sheets, to be sold at a franc a sheet. For all these the bookseller Dalp, of Berne, is agent.

*THE CONDITION OF EDUCATION.\**

THE Public School system of this State is now just three score years of age. During all the years it has grown in strength and usefulness, and in favor with the people, and it stands to-day the proudest monument, the noblest achievement of the commonwealth, as it is the surest basis of its social and political prosperity.

There is not a hamlet so obscure, a region so remote, but that its children may receive the bounty of a free education.

During the last school year, ending September 30th, 1871, the results in attendance, and every other essential particular, as appears from the report of the Superintendent of public instruction, were unsurpassed by those of any former year.

Of 1,502,684 children, between the ages of five and twenty-one years, 1,028,110 attended the public schools some portion of the year—a gain of 108,801 in five years. Including the attendance upon private schools and academies, more than eighty per cent. of all persons in the State, between the ages named, attended school some portion of the year.

The average attendance at the public schools was 493,648. In the rural districts it was nearly seventeen per cent. greater for 1871 than for 1867, the last and most successful year of the rate-bill system, although since that time the average length of school terms had advanced to thirty-two and four-fifths weeks, or more than seven per cent., and the increase in school population was less than one-and-a-half per cent. \*The average time each pupil in the rural districts attended school, was seventeen and one-fifth weeks, a gain of twenty per cent. in four years.

The average attendance of the whole State, each day of the entire term of 1871, was 8,943 more than that of the equal term in 1870, and 73,691 more than that of the shorter term in 1867.

The number of school-houses reported was 127 log, 9,914

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\* Extracts from Report read by Hon. Edward Danforth, before the N. Y. State Teachers' Association, July 24th, 1872.

frame, 1,182 brick, and 505 stone, making a total of 11,728, an increase of thirty-three during the year. This is a gain, in ten years, of 211 brick houses; and a decrease, in the same time, of 119 log houses, four frame, and fifty-seven stone. As many others have been built of material similar to that of the old houses in whose place they were erected, the improvements in this respect, and in providing suitable fences and furniture, are best denoted by the amount expended for these purposes. This, in 1871, was \$1,594,060.93, of which the sum of \$901,198.14 was raised and expended in the rural districts. During the ten years ending September 30, 1871, the sum of \$13,363,629.23 was expended for these purposes, and of this \$9,917,264.78 in the last five years, which is more than three times the amount in any equal period preceding. The estimated value of school-houses and sites has nearly doubled in five years, it being for 1871, \$23,468,266. The present average value of houses and sites in the rural districts is \$780.46. In the cities, \$39,055.89.

The gross amount expended for teachers' wages, in 1871, was \$6,653,093.05. This was an increase of \$156,400.66 over the preceding year, of \$2,094,202.39 in five years, and of \$3,997,641.35 or over 150 per cent. in ten years. Allowing for the increase in the number of teachers employed, and their average annual salary has increased in five years more than twenty-eight per cent.

The foregoing statistics furnish abundant evidence of the disposition of the people to patronize and support the public schools, and that the stimulus imparted by the free school act, though marked at first by unusual and almost surprising results, is no spasmodic force, but, instead, an abiding and growing power. Yet, the value of any enterprise, however well devised and liberally supported, must chiefly depend upon the character and efficiency of those intrusted with its execution. The annual expenditure of \$10,000,000, and the constant service of nearly 18,000 teachers, will be worse than wasted except that the schools fulfill their legitimate purpose in laying wisely the foundations of sound learning and virtuous citizenship; and in exact proportion to their efficiency in these respects will the State derive from them a suitable return.

According to the last published report of the regents of the university, the number of academies is 209, from 187 of which reports had been received. About ninety of these constitute the academic departments of graded schools in the cities and villages.

The attendance at academic schools, including primary departments, was :

|              |        |
|--------------|--------|
| In 1866..... | 36,434 |
| In 1871..... | 30,370 |

The regents in their report remark : " From that time (1867) to the present, the diminution has been constant, and to the last year increasing. Four of the largest academies have recently been changed to normal schools, and have ceased to exist as academies and to report to this board. They had an aggregate attendance of about one thousand pupils. The law which changed the support of the common schools from rate bill to tax, was enacted in 1867. These schools were thus made free. . . . They have in this way undoubtedly diminished the attendance on the academies, which are mainly supported by the payment of tuition. The smaller and feebler academies have, from this cause, in many instances, languished, or been absorbed into the public school system as academical departments.

" Under the general union school law, an academical department may be established in a union school ' whenever, in the judgment of the Board of Education, the same is warranted by the demand for such instruction.' When the number of academic scholars, in a union school district, is sufficient to constitute a vigorous academy, with a fair probability that the number will continue for a series of years, and the people unite in providing liberally for its support, such a department will constitute the best school that can be established. The regents have great gratification in referring to such in successful operation in most of the cities, and in some of the larger villages of the State. . . . The people of the State may well congratulate themselves on their system of education."

The attendance of academic students for 1870 was 7,456. The attendance for this and the five years preceding was as follows :

|              |        |
|--------------|--------|
| In 1865..... | 20,443 |
| In 1866..... | 13,140 |
| In 1867..... | 10,801 |
| In 1868..... | 9,208  |
| In 1869..... | 8,840  |
| In 1870..... | 7,456  |

Upon this subject, the regents report :

" The table shows that the number of full academic scholars is reduced in even a greater ratio than the whole attendance, being in the last year less than one-third of the maximum number of the preceding seven years. This is believed to be principally caused by the system of preliminary examinations, instituted several years since. The former mode of examination, though designed to secure the same object as the present, naturally tended to great laxity. The principal of the academy, who alone conducted it, and determined its results, was often solely interested in that result, and was little likely to permit his interests, or those of the academy of which he had charge, to suffer by his severity of judgment. The temptation was strong to make the number of academic scholars the greatest possible, and it has excited no surprise that under the present system of uniform and precise tests, the number is reduced."

In consequence of this diminution in the number of pupils, the allowance per capita, in the annual distribution of \$40,000 from the literature fund, has increased from \$1.76 in 1862 and \$1.95 in 1865, to \$5.35 in 1871, besides the sum of \$21,000 apportioned for books, apparatus and teachers' classes, making a total per capita of \$8.18. As an additional encouragement to these institutions, the legislature of 1872, by a clause in the appropriation bill, provided for an annual tax of 1-16 of a mill upon the assessed valuation of the State, and appropriated the avails thereof to the amount of \$125,000 for distribution by the regents to the academies and academical departments of union schools in the State. This additional sum would make the aggregate yearly allowance for each of the present number of academic pupils \$24.09 per capita.

The library system of the State is in a dilapidated condition and needs repairing. With few exceptions the libraries



are neglected, and the moneys appropriated for their support are, in many instances, diverted from their legitimate channel, and used for other purposes or wasted. The repeal of the law requiring the town to raise an amount for this purpose equal to that received from the State, and the permission, on certain conditions, to use library money for the payment of teachers wages, are the principal causes of the decline. The reports of the State Superintendent of Public Instruction have fully discussed this subject and shown the necessity of legislative action, if the system is to be saved and restored to usefulness; and it is unnecessary that your committee should extend their report upon this point. The decrease in the reported number of volumes, the past year, was 58,381, and, since 1853, at which time there were more than sixteen hundred thousand volumes in the libraries—675,894—although during the period intervening, the sum of \$990,000 has been apportioned to the districts for their support.

The foregoing statements give the numerical results of the educational work in this State.

We believe there has been improvement in the quality of instruction, especially in those counties in which supervision has been most thorough and effective. There has been an increased demand for better teachers and a much larger number of persons have resorted to our normal schools to obtain the requisite training.

By the establishment of normal schools, of which there are now eight in successful operation, and the maintenance of teachers' institutes and classes, the State has clearly indicated its purpose that the public schools shall be made worthy of the liberal patronage and support which they receive, through the employment and service of well qualified teachers. During the year about closing, the attendance of normal school pupils has been nearly three thousand, and the number of graduates over three hundred. On this basis, when there has been time for classes, in the younger normal schools, to complete the prescribed courses of study, the total number of graduates will be not less than 800 each year. Besides, there are large numbers who complete partial courses of study and training at these institutions,

and go out rendering good service in the schools of the State.

The membership upon teachers' classes in the ninety academies designated by the regents for that purpose, was 1,541.

During the calendar year 1871, fifty-seven institutes were held in fifty-seven counties of the State, besides one for Indian teachers on the Allegany and Cattaraugus reservation, with an aggregate attendance of 10,413—the largest number ever recorded in a single year. This was eighty per cent. of the entire number employed for the legal term in these counties in which institutes were held. The fact that so many have availed themselves of the various means provided for special preparation as teachers, is certainly an encouraging indication that improvement in methods of instruction and school management will be developed in the schools.

All will admit, in general terms, that the true object of education is to develop and discipline the powers by which knowledge is acquired, rather than the acquisition of knowledge itself. Yet, in our school routine, there is often too great eagerness for immediate and showy results, too much servility to the mere mechanism of specific processes, and too little regard for the formation of those habits of close observation, discriminating analysis, and independent thought and investigation, by which the noblest results of human culture may be secured. Courses of study and methods of instruction should be made to subserve this supreme object in education. Too much time is spent in memorizing dry details of little value for knowledge or culture, and the study of natural objects, valuable in themselves and valuable for discipline, is neglected.

We would not trespass upon the province of another committee by indicating what improved methods should be adopted.

We believe that only through the service of teachers trained for their work, and of supervisory officers competent and thorough in the discharge of their duties, can our schools be brought to the highest condition of excellence.

*WEST POINT MILITARY ACADEMY.*

THE recently published report of the Board of Examiners annually appointed to visit the West Point Military Academy, calls attention anew to this justly celebrated national institution. We owe so much to the skill and bravery of its graduates, and we are at the present time so dependent upon them for conducting important operations under government control, that we are always disposed to regard it with partiality. Not only in the trying emergencies of war, but scarcely less so in peace, have we found their services of inestimable value. They have improved our harbors and our navigable rivers. They have surveyed and mapped out our inland waters. They have located our boundary lines. They have explored our public domain, found pathways for railroads, and enriched science with contributions gathered in mountain and valley. All these varied and complicated operations have they conducted with a skill and a versatility which renders us proud of this department of our public service.

While we have complained, and had just reason to complain, of those who collected our national revenue, who carried our mails, who mismanaged our Indian affairs, who represented us in foreign lands, we have in the main had good reason to be content with our military service. It may be pointed to as something notable in our affairs, that if the hord of embezzlers and peculators who year after year rob the public revenue, and grow rich out of public plunder, so few have come from the graduates of West Point. In times of national calamity, when greedy vultures followed in the track of our armies, when shoddy contractors were cheating us, when unscrupulous brokers were selling us rotten steamboats, when bounty-brokers were trafficking in their country's necessity, when the public money stuck to the fingers of the paymaster; how rarely was the voice of reproach or suspicion heard to attack the officers of our little regular army, who were relied upon to conduct the varied military affairs! If anything were needed to give us a favorable impression concerning the management of the

institution where these men were trained, these facts might be depended on to do it. Whatever defects it may have, it has assuredly been successful in instilling into its graduates a high sense of honor, a just pride in personal integrity, and a proper abhorrence of the low arts of roguery.

The report of the Board of Examiners, to which we have referred, gives liberal credit to the institution for its many excellences. It commends unstintedly the able officers who superintend it, and the learned professors and their assistants who instruct in it. And yet it criticises very freely some of the features of the institution which came under their notice. Fortunately this board contained a greater number than usual of practical educators, who were competent to speak intelligently concerning an institution of learning, and whose judgment in regard to what is commendable and what is faulty deserves a careful consideration. And in spite of all that must freely be acknowledged as having been accomplished in the past by West Point, we must confess that there seems some just ground for their criticism. The broad charge which is made against it is, that as an Educational Institution, having exceptional advantages and possessing a representative national character, it has by no means kept pace with the developments of modern learning. This impeachment we sustain on several grounds.

1. Its students are admitted to it with absurdly inadequate preparation. Remember that the age required for admission is from sixteen to twenty years. Remember, too, that the military service in the United States is exceedingly popular, and that admission to this school, as the avenue by which this service is entered, is the cherished ambition of thousands of lads in every part of the country. If competition were open, a hundred times the admissible number would annually seek to enter. And yet with all these circumstances which would render higher qualifications easily attainable, the merest rudiments of a common school education are all that are required for admission. Reading, spelling, English grammar, geography, and arithmetic, are the principal subjects in the preliminary examination. Any intelligent lad, who possesses the capacity to entitle him to

this distinction, ought certainly to have mastered these subjects at twelve years instead of from sixteen to twenty. The low requirements therefore only serve to bring in a proportion of stupid lads who may by force of "coaching" be brought up to the requisite standard by the time they are sixteen. These have either to be weeded out by subsequent examinations, as they are in great numbers, or the subsequent studies must be diluted to suit their weak digestion. Even lads, who enter with much better preparation than what is required, reap but little advantage from it, because they are obliged, in deference to their weaker associates, to spend valuable time in going over subjects with which they are already familiar.

Nothing would be easier than to obtain a ready supply of students for the Military Academy, who besides being familiar with the subjects named above, should also be well grounded in Latin, familiar with simple and quadratic equations in Algebra, and with plane and solid geometry. Such an addition would still make requirements less than those for entering at the same age any of our colleges or scientific schools, and which would be still more readily obtained for entering an institution so much sought after as the Military Academy. The advantages of such a change would be manifest. It would be equivalent to adding at least one year to the course of study. A better class of young men would be obtained,—young men who have had the benefit of a better training, who have been tested and sifted out by more difficult educational drill, and who in consequence would be better able to profit by the course upon which they enter. The government would be saved the expense of doing what thousands of schools throughout the land can do equally well, and its superior instructors and its superior educational equipments would be legitimately employed to train these young men in the higher departments of learning.

The defence made for this anomaly is, that students for the Academy are by law to be taken from all parts of the country, and it would be manifestly unjust to those parts less favored with educational facilities, to put the terms of admission beyond their reach. Leaving out of account the

stimulus that such requirements would be to the several States to provide better educational facilities, it can be easily shown that the requirements named are far within the educational facilities of the least favored parts of the land. The truth seems to be, the terms of admission were essentially fixed many years ago when the institution was an experiment, and when the means of education were exceedingly limited in many portions of the country. They have not been advanced, when the occasion which required them to be low had passed away, and when the credit of the institution, and the demands of higher culture and more thorough learning, imperatively require the advance.

2. Its curriculum of study is faulty. It lacks almost entirely what is considered an essential in modern education, viz., linguistic training. It does not require anything but the simplest rudiments of English grammar to enter. It does not furnish instruction in Latin, or Greek, or German, and is content with giving a very imperfect course in French, and a still less perfect in Spanish. Anything like a critical study of old English is of course not attempted. We would not of course forget that this is especially a professional school, and is designed to teach the science and art of war. But it has chosen to assume the place not only of a professional school, but also of a school for general culture. Instead of exacting this culture as a condition for entrance, it undertakes the task of giving to the future soldier his entire education. Here he must receive whatever of that liberal learning which distinguishes the educated man from the uneducated. His knowledge of literature, of political science, of law and government, of ethics, of history, all must be obtained, so far as institutions can teach it, at this national school. Every practical educator knows the importance in imparting this general culture of the study of language. No educational expedient has ever been devised which can take its place. Hence we say unhesitatingly, that at the very least the student at West Point ought to be required to possess on entering, a good grammatical knowledge of Latin, with the ability to read the common Latin authors; that he should be thoroughly trained during his course in German and French, so that he

can both speak and read these tongues with fluency ; and that the English, both in its earlier and later forms, should be critically taught.

3. Judging from the published curriculum and the provision made in the board of instruction, we should infer that very inadequate provision was made for teaching belles lettres, social science, or mental and moral science. Those departments of education are of vast importance to the future soldier. They must be depended on to give him that breadth of view, and that intellectual grasp which will enable him to meet the various important exigencies of life. The army officer can no longer be regarded as a mere leader in war. He is called upon to fulfill numberless duties incident to his service which lie far outside of his immediate profession. He is a citizen of the Republic, and is looked to to take a leading part in its political affairs. It is the most shortsighted policy, therefore, to restrict his education to those things alone which pertain to war. One of two changes should be made ; either the student at the Academy ought to be required, before entrance, to have passed through a course covering these important subjects, or he should be afforded an opportunity to pursue them at the Academy.

4. The facilities for teaching science have not been kept up with the demands of the age. This is the special field in which this institution might fairly be expected to be eminent. Every department of science furnishes important contributions to the education of the soldier. And yet we do not find that development in the means of teaching science which the growth of the sciences demanded, or which other less favored institutions of learning have been prompt to make. Take for instance astronomy. That is a science directly valuable to the officer in his duties of geographical exploration, of locating boundaries, and making surveys. And yet, judging from the report of the Board of Examiners, it does not receive that attention which its importance demands. That would require a separate department, with a professor devoted entirely to that subject ; it would require an observatory not fitted with costly instruments too fine to be used, but equipped completely

with serviceable instruments for the use of students, and it would require that every student should be made familiar not only with the theory of astronomy, but with the practical manipulation of the instruments. We should say also that in the department of Natural Philosophy it should no longer be taught merely as a mathematical science, demonstrable on the blackboard, and illustrated with occasional experiments, performed in the presence of the student. But the institution should be provided with a physical laboratory, in which sets of apparatus, illustrating all the important problems of physics, should be provided, and each student be trained to verify, by actual experiment, the laws which are propounded.

The vast department of engineering, the most important to the soldier, the Board point out the expediency of dividing, so that the professors in charge, having their duties confined to narrower limits, might not only pursue their own investigations more thoroughly, but carry into their instructions a greater freshness and vigor. The same suggestion might well be extended to many other departments of science. The truth is, many of these branches of science have almost entirely come into existence since the present system at West Point was founded. Science has become so extended and subdivided, that it is no longer possible to entrust to the same person so many of its subdivisions, or to expect the most thorough knowledge and the best skill in teaching, when the subjects are so widely different. It is neither fair to the professor or the student to have what have now become the most extensive sciences attached as a sort of irrelevant appendage to some other important and perhaps disconnected subject. At least a half dozen new professorships are wanted at West Point, in order to place the teaching of science on a proper footing.

In presenting this array of criticisms, we may have given an impression that West Point is a much less excellent institution than we believe it to be. It is because we feel a just pride in it, and have admired the learning of its professors and the achievements of its graduates, that we have deemed it due to it to point out its defects. Great educators, such as have labored at West Point, thorough drill, such as has



been given there, cannot fail to have produced good results, even under a defective system. Managed as West Point is, by the War Department, and dependent as it is for carrying out improvements upon appropriations by Congress, it cannot be anticipated that it will be able to introduce requisite changes as readily as an ordinary college. Public sentiment must demand such changes before they can be expected from the liberality of Congress. We shall have fulfilled our purpose if we may have contributed to form public opinion on so essential a subject, and thus enable those who have its best interest at heart, to carry out plans for its improvement.

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"GOOD BYE."

AN intelligent correspondent of an excellent paper recently wrote, "Never does 'that good old word *Good bye*' seem so full of its best significance of 'God be with you' as when spoken from the deck of a steamer outward bound." We readily admit that there are but few places where one feels like saying to a parting friend, "God be with you" with more heartiness than on the deck of a steamer about to bear that friend away over the fathomless ocean. But when it is asserted or implied that the expression *good bye* is only another form for "God be with you," we beg leave to dissent. That, we know, is the common view; and though, in dissenting from it, we incur the risk of being considered heterodox, we shall not on that account be deterred therefrom.

Instead of its being "a corruption of *God be with you* (*b' w' ye*)," as Webster's Unabridged Dictionary teaches, or a "corruption" of any other expression, *good bye* consists as plainly and truly of two honest, hearty, and well-meaning Saxon words as its kindred expression *good morning* or *good night*. The word *bye*, as a noun, has long since gone into disuse in English, except in two or three phrases. As a synonym of *way* or *journey*, it is no longer in general use. And yet it is as such that it appears in the expression *good*

*bye*. As *good morning*, *good evening*, *good night* are but contractions of the phrases "a good morning to you," "a good evening to you," "a good night to you," so *good bye* is but a contraction of "a good bye (journey) to you," for which we still say "a pleasant journey to you;" and nothing but the fact of the obsolescence of the word *bye* in this sense would have ever suggested any other origin or meaning for the expression. The idea of God being with the one addressed, therefore, it will be seen, does not inhere in *good bye* any more than in *good morning*, *good evening*, *good night*, etc. Yet, in using these expressions, a devout mind *may* connect it with them all.

There is a note-worthy use of these phrases to which we would call attention. *Good bye* is used only on parting, never on meeting. So with *good day* and *good night*. We use these expressions only on taking leave of others. But *good morning*, *good afternoon*, *good evening*, we use alike on meeting and on parting. Again, the use of any of these expressions, except *good bye*, implies that the previous or the subsequent separation is one of comparatively short duration. On meeting a friend after months of absence, one would hardly say "Good morning!" or "Good evening!" or "Good afternoon!" Or if we are parting with a friend whom we do not expect to see again for weeks or months, if ever, we do not say "Good day!" or "Good night!" "Good morning!" or "Good Evening!" but "Good bye!" If we should hear friends, who were parting for a separation of months, say "Good day!" or "Good morning!" we should set the friendship down as extremely heartless, and the parting as equally cold and indifferent. These expressions denote but brief periods, a few hours, a morning, an evening, a day, a night, perhaps a little longer. But not so with *good bye*. This naturally implies a long separation, as of a journey to some remote point requiring more than the few hours of a morning, or evening, or day.

In comparison with *adieu* and *farewell*, *good bye* is more colloquial in character, and carries more heart with it. The former belong to the regions of poetry and romance rather than to that of every-day life and heart-felt friendship. Hence they are cold and stiff as compared with the latter.

And yet, strange to say, especially since *adieu* is derivatively an unusually solemn word, they answer very well when thrown off in a light, nonchalantic way after casual or brief interviews. But when a word expressive of real feeling is required, we say in the language of the well-known song,

“But give to me, when loved ones part,  
That sweet old word *Good-bye*.”

This hearty old Saxon term is then preferred to all these others; it is the only single word that will answer.

S. W. W.

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THE ARGUFYING MAN.

THE *London Globe* has a suggestive article on “the argufying man,”—a type which unfortunately is not confined to England, and which, wherever found, constitutes one of the most outrageous bores to which society is subjected. It says: “anything will do for him to contradict you about. He runs contrary to every ordinary or sensible opinion, not only on principle but upon system. It is his nature. He will prove to you before your face that you were a fool for differing with him, and yet he likes, he almost sucks his lips over a tough antagonist. Indeed, he will often turn round, as it were, upon an unfortunate man who agrees with him prematurely, for the sake of peace, and who to his dismay, finds that he has after all gained nothing by the surrender, his torturer having simply shifted the ground of contention in order to renew the battle. A story is told of a confirmed and inveterate argufyer who, on one occasion, acted on a jury. The case was plain enough, and eleven were for a verdict one way, but the argufyer held out. At length he wearied and bullied the lot into his views. They thought their release was at hand. To their horror, he said it suddenly struck him that they were right in the first instance, and that he would now sooner eat his boots than be at one with them. Here was a typical illustration of the argufying method. This, however, is a rough and common instance. Another species of the same bore is

of a learned turn. He has Whately and Mill at his fingers' end, and he will be down on you immediately if you do not formulate your logic according to rule. He cannot grant you that premise, your major or your minor proposition is out of gear. \* \* \* You only required a capacity a degree above that of a congenital idiot to perceive how the matter really stood. For the argufying man is horribly abusive. He pretends to be cool, and he is cooler than he knows; but he has a taste for indulging in spite under the false pretence of imparting instruction. And, with his constant proclamation of reasoning according to art and science, he is as slippery and as elusive as an eel in a wet meadow, when you try to take him up fairly. He will shirk the question, confuse the question, play hanky-panky with it, and substitute another for it—condescend to every controversial subterfuge, sooner than acknowledge himself beaten. Of course he does acquire a certain linguistic dexterity from the constant employment of his tongue in the recreation of quibbling. But, if you could only appoint an umpire, the number of points that could be scored against him would surprise those who are in the habit of venerating him as Sir Oracle.

“What renders it so difficult to put up with the argufying man is the circumstance that he never contends for truth, but for triumph. This is plain enough from the dishonest and uncandid way in which he goes to work. He will grant nothing; never confesses to the most palpable hit, though you have bent your foil against his pad half a dozen times in as many minutes; and he never knows when to stop. He is not satisfied with an imaginary victory. Whenever he thinks you are down because you are silent, he gives you a sort of verbal kick to rouse you for another combat. Loyola was a simpleton to him in casuistry. He has the trick of escape possessed by that fish who can hide from his enemies by exuding a preparation which renders the water around him dark and obscure. Without having a specific acquaintance with a topic which it may be in your line or your bent to understand, he is still ready to contradict a doctor in medicine, or a composer in counterpoint. He bristles with paradoxes, and he is an artful imposter in the method in

which he conducts his business. He starts with knowing little or nothing of the subject on which he desires to argufy. But, as the Attorney-General said of the claimant, he picks your brains as you go along. Besides, if he can only confound you with your own words and statements, his elation is all the greater. 'Stop now, sir! Just now you said that, and now you say that; the two things can not be true.' This, you will perceive, he may effect, though in total ignorance of the theme on which he has driven you into an engagement. On the whole, the argufying man, it is obvious enough, is a personage to be avoided. Fly him, if you can at all with convenience."

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#### *NOTES ON AN EXAMINATION OF TEACHERS.*

AT a competitive examination of teachers to select a principal for a district school, where the salary was \$1,500 per annum, eighteen gentlemen who had been principals and four ladies were examined. The following words were given them to spell :

|              |             |              |            |
|--------------|-------------|--------------|------------|
| Poniard,     | Allege,     | Mignonnette, | Bouquet,   |
| Separate,    | Exhilarate, | Privilege,   | Excellent, |
| Business,    | Hymeneal,   | Ethereal     | Supersede, |
| Mingle,      | Cats-paw,   | Ecstasy,     | Ventilate, |
| Scintillate, | Daguerrean. |              |            |

One lady, a graduate of Packer Institute, Brooklyn, spelt all correctly, and she was the only person that did. One gentleman spelt all but one word rightly. All were able to perform examples in square root and in cube root; but to the question, What are the two mean proportionals between 6 and 750? but one correct answer was given.

In grammar they were given the following nut to crack :

A man conveyed a farm adjoining a pond formed by the back-water of a creek. The water was kept up by a dam intended to be permanent. A part of the boundary line was as follows :

"Run S. 17° E. to the margin of the pond, thence con-

tinue in the same direction to the middle of the creek in its natural channel *when* the pond is *exhausted*; thence with the middle of the channel of the creek in its natural bed," etc. In this sentence, what part of speech is "when," and "exhausted?"

Almost all concurred in classing "when" with conjunctive or connective adverbs, and in considering it as introducing a restrictive clause limiting the boundary line to the bed of the creek, and excluding the bed of the ponded creek. "Exhausted," was, by many, regarded as a participial adjective having the sense of "empty." Some thought "when" was an adverb of time limiting the word "run," and that, in consequence, the phrase was ungrammatical, inasmuch as it thereby established a boundary which, by its terms, could never take effect.

Passive. The phrase occurs in the description of the boundaries of lots in the mill tract, in St. Louis, and the ownership of property worth a million of dollars depends on the grammatical construction of "when." If it is an adverb of time it nullifies the boundary. If it is a conjunctive adverb, it limits and restricts the location of the line to the bed of the natural creek, and excludes the bed of the creek forming the pond.

The Supreme Court of Missouri has solemnly adjudicated that, "when the pond is exhausted" was inserted to postpone the time for establishing the boundary till the pond (which was to be kept up forever) should be destroyed. It says, "when," etc. must refer to the time when the boundary should take effect, or it has no meaning whatever. Now, quere, which is right? Are our teachers and grammarians judges? If so, are Missouri Judges grammarians?

To the question, "what is the capital of Japan, and where is it situated?" elicited the information that Yeddo is now written with one d, on the authority of a correspondent of a New York newspaper writing from Japan.

The question, who was king of France in the time of Shakespeare? was answered rightly by but one.

I give these items as showing something of the ordinary attainments of school teachers upon the matters under examination.

*JEWISH PHYLACTERIES.*

PROF. HITCHCOCK brought back from the Holy Land, among other curiosities, preserved phylacteries, which are described as follows in the New York *Evening Post*: Phylacteries—the common Greek word for amulets—were worn very generally by the Jews at the commencement of the Christian era. They consist of a narrow strip of parchment, about eighteen inches long, on which are carefully written in invowelled Hebrew, four passages from the Old Testament—*Exod.* xiii. 2-10; 11-17; *Deut.* vi. 4-9, and 13-22. The strip is rolled up, and placed in a little leathern box, one inch and a half square, which is then bound to the left elbow, by cow-hide straps, half an inch wide, and long enough to be wound spirally about the arm down to the base of the middle finger. There is a smaller phylactery for the forehead, the box for which is scarcely an inch square. It has also a leathern fillet, which is tied at the back of the head, and then brought around to the breast. When Christ reproved the Pharisees for making broad their phylacteries (*Matt.* xxiii. 5), he doubtless alluded to their custom of increasing this smaller box, so as to make its diameter three or four inches, and conspicuously wearing it over their eyes to attract the attention of the multitude. The original use of these phylacteries was, probably, to serve as reminders of the law. Except by the Pharisees, who paraded them on all occasions, they were worn only at times of prayer. Subsequently they were put on for charms, like the Koran among the modern Mohammedans, and were supposed to drive away the devil, ward off temptation, and ensure long life. There is no historical reason for believing that they were in use in pre-exile times. Indeed, from the similar customs of the Babylonians and other Oriental nations at the time of the captivity, it is probable that the Jews learned the practice from their captives.

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THERE is no vice that doth so cover a man with shame, as to be found false and perfidious.

## CURRENT PUBLICATIONS.

ETYMOLOGY was once characterized as a science in which the consonants stand for very little, and the vowels for nothing at all. And in the old days, to say sooth, there was much reason for such a sneer. The haphazard way in which etymologers gathered and employed their materials, the cool indifference with which they ransacked all related and unrelated tongues for similar combinations of letters, careless of all historical connection, the random guess-work in which they manifestly indulged, were well suited to excite the derision of the votaries of the more exact sciences. And even now, when we are informed that *Tigris* and *Hiddekel* are the same word, though with not one common letter; that *black* primarily signified *white*; that *belfry* has no connection with *bell*, any more than *beef-eater* has with *beef* and *eat*; we of the laity, unversed in the subtle disguises and protean transformations of human speech, are almost inclined to join the scoffers, and cite that famous derivation of *King Pepin* from the Greek pronoun *οσπερ*—:

“*ὄσπερ, ἦπερ, ὄπερ*, diaper, napkin, nipkin,  
Pipkin, pippin king, King Pepin.”

It were easy to make merry of much which “painful” scholars have done in this line, of the *lucus a non lucendo* logic with which they have tried to help out their blind conjectures; but in these last days we are forced to confess that we have the beginnings at least of what seems to be a true Etymology. Nay, we are not sure that any of the physical sciences have made more rapid or sounder progress than the new Science of Language. Perhaps, too, it can abide a comparison with any of them as to the greatness and number of its discoveries, and the importance of the consequences resulting from them. Certainly we may affirm that, as an exhibition of intellectual acumen, of successful inquiry and research that have seemed sometimes like magic and divination, it occupies the very foremost rank. We are less disposed to make fun of the word-mongers than we used to be. They have turned back too many bolts already, and opened too many hitherto fast doors, to allow us longer



to doubt that they have hit at last upon the master key. And we begin to entertain a suspicion that, if we had had more knowledge of their art, we might perhaps have amused ourselves less at their expense.

This second edition of Mr. Wedgwood's *Etymology* <sup>(1)</sup> will be welcomed, we are sure, by all teachers and all thorough students of English; especially as its compact form and reasonable price bring it within their reach. Those who, like ourselves, were "taken in" by the first volume of Sheldon & Co.'s American edition, (a better specimen of typography, by the way, than either English issue,) can set the money paid for that to the account of profit-and-loss. Mr. Wedgwood has a theory, it is true, and one of which he rarely loses sight; a theory which we cannot as yet believe to be good for so much as he would fain convince us it is. He holds to a combination of what Max Müller has styled the bow-wow and pooh-pooh theories of the origin of human speech; in other words, to its primary onomatopoeic or imitative, and instinctive character; and this view is unfolded and enforced in an admirable Introduction, in which he replies with some spirit, and, to our mind, with no small measure of success, to some of Müller's strictures upon the imitative and interjectional theories. This preliminary discussion is an entertaining, as well as a learned one, and by no means "in the air," though its "Darwinism" will be far from agreeable to many. Various etymologies have been altered from those in the first edition; some, apparently, in consequence of the critical annotations of Mr. George P. Marsh, in his edition of the first volume (A to D.) An \* generally warns us of these changes, but we trace the influence of Mr. Marsh's notes in not a few instances in the first four letters where this sign is not found; in *alight* and *anneal*, for example. We hope the American may yet give us the results of his criticism of the whole work of the Englishman. We should add further, that the revised work admits the Latin and Greek roots of the language, and so makes a more complete manual than the first edition.

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(1) A DICTIONARY OF ENGLISH ETYMOLOGY. By Hensleigh Wedgwood. Second edition, thoroughly revised and enlarged; with an Introduction on the Origin of Language. New York Macmillan & Co. 1872.

To what extent it is best for the merely English scholar to concern himself with the ultimate roots of our language, we are not prepared to say. The pursuit of etymologies may be fascinating, even when one is but slenderly equipped for the work. That our own speech may be so studied as to yield some of the benefits claimed to flow only from a critical investigation of the "classical" tongues, we make no question. Nearly all depends on the teacher, however. If he have a lively enthusiasm, joined with real learning, he will be surprised at the interest he can awaken in minds naturally disposed to this class of studies. Mr. Conant's little volume<sup>(2)</sup> furnishes a very usable list of roots, chiefly Greek and Latin, a good variety of selections for analysis, and suggestions as to the way this analysis should be conducted. On page 8, Mr. Conant *seems* to countenance the doctrine that words may be assorted as verbs, nouns, etc., before they are arranged in sentences. Grant this to be true in English to a limited extent; it is not the best, it is not a philosophical way of teaching the use of the parts of speech. *Letter* (to quote the examples of the text) may be a verb as well as a "noun." *Notwithstanding* may sometimes be a "preposition," but why not also a conjunction or participle? As to *gentlemanly*, we cannot admit that it is even a potential "adverb." The truth is, that in an uninflected language like English, it matters very little what class a word belongs to, so long as it sustains no relation to other words. In the old days, when we practised "parsing" at the district school, we remember that the girls, some of them, used to consult their dictionaries to see whether the words were marked *adj.*, or *adv.*, or *conj.*; but we do not remember that any accomplished grammarians were made by this process. Mr. Conant's little book, we add, would be a convenient complement to almost any advanced Grammar.

ONE of the very best books we have ever seen for the study of the elder English is *The Legende of Goode Women* in the thorough and scholarly edition of Prof. Corson. How extensively it may have been used as a school hand-book, we

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(2) A DRILL BOOK IN THE ELEMENTS OF THE ENGLISH LANGUAGE, with a Collection of Roots of English Words, their Meanings and most common Prefixes. By Edward Conant, A.M., Principal of the State Normal School at Randolph, Vt.

do not know ; that it deserved a wide introduction, we are sure. The volume now before us<sup>(3)</sup> covers the whole range of the language from the earliest remains of the Anglo-Saxon, or English, as Mr. Corson writes it, to Chaucer and Gower. The selections fill 327 pages, and seem to us to have been made with excellent judgment. They are sufficiently varied ; they are interesting in themselves ; and some of them are specimens of works of exceptional value to the historical student of the English tongue. A Glossary follows the text, and after this, compends of Anglo-Saxon and Old South-English Grammar, with remarks upon the forms peculiar to Layamon and upon the characteristics of Early-English Verse. Twenty years ago such a compilation would have been to us a treasure beyond price. We hope to hear that it has found place as a class-book in many colleges besides Cornell. The increased attention given in these latter years to the prime sources of our native speech is a wholesome and cheering sign. The English-speaking man, who would wield his vernacular with terseness and vigor, who would say exactly what he means and no more and no other, and say it in such way that the many shall think and feel with him, will do well to begin his studies far back among the springs of our noble speech. We can give no surer recipe for attaining a racy, nervous, idiomatic style.

Prof. Corson seems to us to credit his students with more linguistic knowledge than the majority of them will be likely to possess. The Grammars and the Glossary are all exceedingly condensed, while of grammatical and illustrative notes there are none at all. The lack of these may be made good by the living teacher ; but many a youth, we trust, will "seek out the ancient mother," even if he have to make his way with no other guide than his books.

The mechanical execution of the book does honor to the press which issues it. Now we hope we may see, and before many more years have gone by, that great "Thesaurus of Archaic English," of which Prof. Corson issued specimen pages several years ago. If there are not six hundred people in the United States who want a copy of it,

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(3) *HAND-BOOK OF ANGLO-SAXON AND EARLY ENGLISH.* By Hiram Corson, M.A., Professor in the Cornell University. New York: Holt & Williams. 572 pp., 12mo.

then we over-estimate the present degree of interest in the earlier English.

IN his *DESERT OF THE EXODUS*,<sup>4</sup> Professor Palmer has rendered a great and valuable service both to Oriental Geography and to Biblical literature and interpretation. Notwithstanding the great number of books on Sinai and Palestine, the regions here described and usually known as the Desert of Sinai, *et Tih*, Edom and Moab, have been in their minute geography almost unknown regions. Our own Prof. Robinson had given altogether the best account of the Sinaitic peninsula, but within the past four years, so little was known definitely on the subject, that an effort was seriously made by an English traveler to demonstrate that through all the ages the world had been wrong in regard to the mountain it had designated as Sinai; and that another mountain, not hitherto known by that name in modern or mediæval times, was the true Sinai. Professor Palmer, in the employ of the Ordnance Survey of Sinai, and subsequently under the direction of the Palestine Exploration Fund manager, explored this whole region on foot, occupying eleven months in the work. He was an excellent Arabic scholar, speaking the language as fluently as a native, and thoroughly familiar with the customs, manners and habits of the Bedawin, and the value or want of value of their traditions. The result of this eleven months' exploration is the volume before us; the finest contribution yet made to the geography of the Sinaitic peninsula and the region east of the lower Jordan and the Dead Sea. Professor Palmer has left no point unexamined; he has settled questions which have hitherto puzzled and confounded the best Biblical geographers, and has thrown a flood of light on the sacred record. A former missionary from this country to Syria, who a few years since had traversed this same route, and whose own thorough knowledge of Arabic and of the minutiae of the Sacred geography of this region qualifies him to testify understandingly in regard to it, says of "The

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<sup>4</sup> *THE DESERT OF THE EXODUS: Journeys on Foot in the Wilderness of the Forty Years Wanderings*; undertaken in connection with the Ordnance Survey of Sinai and the Palestine Exploration Fund. By E. H. Palmer, M.A., Lord Almoner's Professor of Arabic, Cambridge University. New York: Harper & Brothers. 1872.

Desert of the Exodus," "the book is every way admirable. Prof. Palmer's qualifications for undertaking this work were of the highest order, and he has done his work faithfully, carefully and well. It must be for the future the standard work on this subject." It may be thought that a work of exploration on the Sinaitic peninsula would necessarily be dry and uninteresting to the general reader. But the Professor has blended so much of interest and incident with his narrative, that it is exceedingly attractive even to those who are not drawn to it by its scientific importance. The Harpers deserve credit for reproducing this elegant volume, for American readers, at so low a price.

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MESSRS. J. B. LIPPINCOTT & CO. have published a handy little volume, with flexible covers, entitled "Every-Day Errors of Speech," by L. P. Meredith. "First Book of

Analytic Anatomy, Physiology and Hygiene," by Calvin Cutter. And "Studies of the English of Bunyan," by J. B. Grier.

MESSRS. HARPERS have issued "A Smaller School History of the United States," by David B. Scott, whose larger history was favorably reviewed by one of our severer reviewers, some months ago. Also, "Middlemarch; a story of provincial life," by George Eliot.

MESSRS. HOLT & WILLIAMS have published "A Brief English Grammar on a Logical Method," by Alexander Bain.

PROF. J. D. WHITNEY, the State Geologist of California, is collecting the facts in regard to the late earthquake.

"A HUNDRED CITIES OF AMERICA" is the title of a forthcoming work from the press of J. B. Burr & Hyde, of Hartford, which will give complete detailed information about all the cities and largest towns in the United States.

"UNLIKELY Tales and Wrong-Headed Essays" is the title of a new comic work by Mr. C. H. Ross, editor of the *London Judy*.

THE first important literary work printed in the United States was a translation of Ovid, by George Sandys. A collection of this author's poetical writings has just been published, with a memoir, in London.

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#### MISCELLANEA.

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HENRY W. SAGE, of Brooklyn, one of the trustees of Cornell University, offered last year to donate \$250,000 to the institution, on condition that instruction shall be offered to young women "as broad and thorough as that now afforded to young men." The proposal was referred to a committee, who proceeded to give the subject due examination. The result is embodied in a printed

report of forty pages, signed by Pres. White in behalf of a majority of the committee. The report states that the committee did not consult the authorities of colleges which have never tried coëducation, and theoretical views, on both sides, were discarded. Correspondence was had with persons in various parts of the country, who could give facts and reasoning based on actual experience in academies, normal schools, or colleges. Another committee, consisting of Messrs. White and Sage, was appointed to visit the leading colleges and universities which are attended by both sexes. The committee visited Oberlin College and Antioch College, Ohio, Michigan University, Northwestern University, and the Illinois Industrial University. Both the testimony of experience and the investigations of the committee agree in the conclusion that the system of coëducation has worked well, and the committee failed to find one objection to it in practice. Its effects on both the young men and the young women are beneficial, and the facts indicate that there is no loss in scholarship. "The young women are at least the equals of the young men in collegiate studies," while their "conscientiousness" in study elevates the general tone of scholarship. Facts are given showing that the health of young women does not suffer from collegiate study more than that of young men. In accordance with the recommendation of the committee, Mr. Sage's proposal has been accepted, and the doors of Cornell thrown open to women. A large building for their accommodation is in process of erection.

PROF. JAMES JOHONNOT, of New York, has been secured as Principal, and Hermann Krusi, of Oswego, as a professor, in the new Normal School at Warrensburg, Missouri.

"SUSIE," said a teacher to one of her pupils, "you shouldn't make faces. You'll grow up homely if you make faces." Susie looked thoughtfully in the teacher's face a moment, and then innocently asked, "Did you make faces when you was a little girl?"

THE following testimonial is found in one of the registers in a Vermont School, under the head of "Remarks of Visitors:" "A very good school indeed. A very nise

school indeed. I has Ben in a Grate meny schools But don't know that I ever was in so quiet a school that I remember of A man."

## PUBLISHERS' DEPARTMENT.

**The Polytechnic:** A new Collection of Music for Schools, Classes and Clubs. Compiled and written by U. C. Burnap and Dr. W. J. Wetmore. New York: J. W. Schermerhorn & Co., 14 Bond St.

Of this most excellent book the press is speaking in high praise. Some of which we give:

This very handy and handsomely printed volume of over two hundred pages, contains the best collection of music for schools, and especially boys' schools, we remember to have seen. The object of the work is to collect the widely scattered melodies with which all are familiar, together with the best college songs and sacred music suitable for the public as well as private exercises of the school. Familiar operatic airs abound, and are harmonized to suit the capacity of young singers. Festival songs, patriotic airs, commencement glees, Christmas carols, songs for meeting and parting, songs serio-comic and grave, combine to make a most desirable ollapodrida for the purpose intended. As a book for the home circle it will find an endless number of admirers. It is well edited, and merits the patronage of the schools and the public generally.—*Christian Union*, July 31st.

*The Polytechnic*, by Mr. U. C. Burnap and Dr. W. J. Wetmore, is the best book of music for choruses and schools that we have seen for a long time. Its greatest and most conspicuous merit is the liberal space given to selections from well-known operatic composers, such as Verdi, Donizetti, Offenbach, and Bellini, whose music has seldom before been set before our schools with the accompaniment of suitable words. Young people cannot too soon begin to get familiarized with the music of good operas; and between these spirited selections and the trash frequently put into books of this kind by well-meaning but stupid persons the gap is very wide indeed. Another good feature about this book is the selection of many of the best college songs, with which our students make their moonlit academic halls resound. The great difficulty in musical instruction has been found to be the feeble support derived from the majority of boys and young men, persons to whom this lively college music will be a positive inspiration. Besides these novelties, this book contains many of the old favorites. We have noticed some unnecessary tinkering of familiar passages here and there, which is inexcusable; but this is not a frequent fault with the compilers, who have written an excellent book.—*Independent*, Aug. 15.

We have sincere pleasure in announcing the issue of a volume of music for schools, classes, and clubs, which is worthy of its good object. It is called *The Polytechnic*, and is compiled and written by U. C. Burnap and Dr. W. J. Wetmore.

Mr. Burnap is the well-known musical editor of the "Hymns of the Church" and the "Hymns of Prayer and Praise," which are in use in many of the Reformed churches. The University of the City of New York, at its last commencement, conferred upon him the degree of Doctor of Music, a title which his solid reputation entitles him to wear with all its honors.

In this work, the joint editors have paid special attention to harmonizing the secular music for mixed voices. Adapting the popular gems of the great masters to appropriate words, and providing a good selection of sacred hymns and tunes for opening and closing school. A portion of the volume is appropriately devoted to a collection of the best "College Songs," which have so great popularity among students. While the music throughout is "intended to be of the highest order," it is carefully adapted to the wants, not only of primary schools, but also of seminaries, normal schools, and collegiate institutions. The publishers have issued it in a handsome octavo form, with good type and paper, and in neat binding.—*Christian Intelligencer*, Aug. 15th.

*The Polytechnic* is the title of a new collection of music. The selections are especially fine and well adapted to schools and amateur quartette clubs. There is a piano accompaniment throughout. The book is neatly gotten up and elegantly bound, and would be an ornament to any drawing room. We can recommend it as the best of its kind now published.—*Rochester Democrat and Chronicle*, July 17th.

It is a handsome new collection of choice music arranged for clubs, schools and the social circle. It contains a particularly fine collection of college songs, many of which are difficult to procure in any other form. The secular pieces have been reharmonized for mixed voices, and the operatic selections, supplied with carefully arranged English words, far superior to the rough, loose paraphrases of the Italian and English texts which we are accustomed to find in books of English opera. The book contains also many beautiful sacred pieces of recent authorship, and is in every way a most desirable work.—*Cleveland Daily Leader*, July 16th.

It is of far higher character than the music usually furnished to schools, and yet of so simple and easy a kind that the smallest children can use it with success. No collection within our knowledge covers so much ground or contains so interesting a selection. It seems equally adapted for young and old, and we think that in both primary and normal schools it will be found far more useful than any book heretofore published. It is lively and diverting all the way through, and the letter press shows great improvement upon all predecessors.—*Poughkeepsie Daily Eagle*, Aug. 12th.



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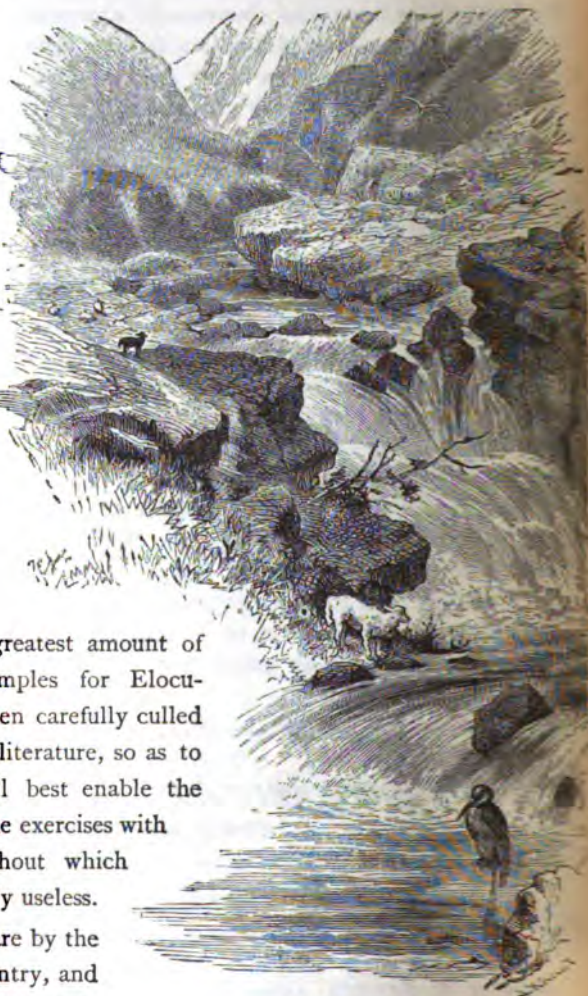
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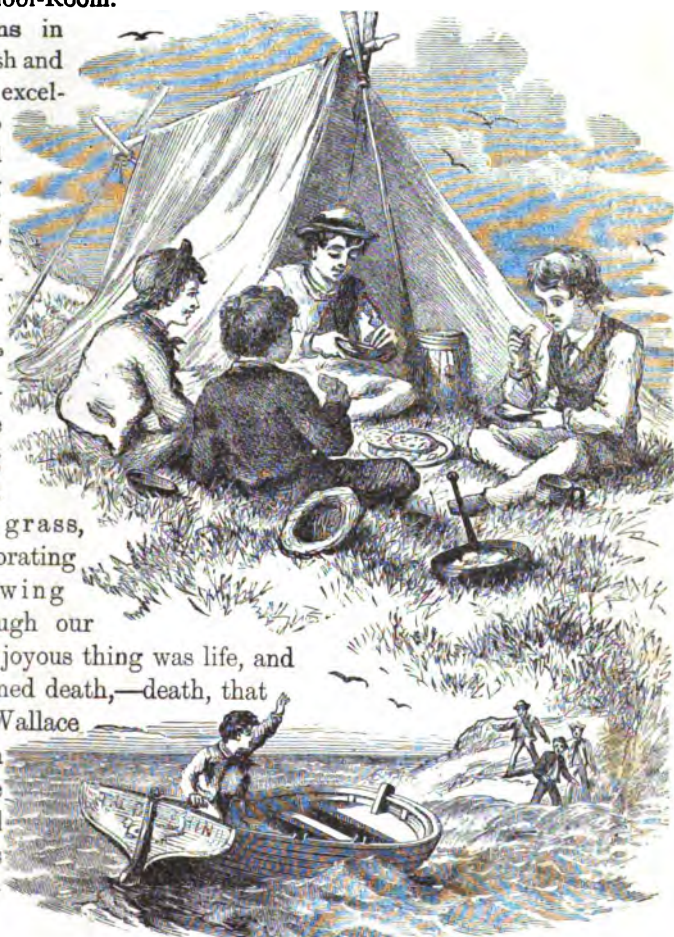
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# AMERICAN EDUCATIONAL MONTHLY.

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OCTOBER, 1872.

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## *THE LIBRARY IN THE PUBLIC SCHOOL.*

SOMETHING more than a year ago a law was passed by the Legislature of New Jersey, providing that the State Treasurer shall pay over the sum of twenty dollars to every school district that shall raise a like amount by subscription for the purpose of establishing within such district a school library, and to procure philosophical and chemical apparatus; and ten dollars annually on the raising of a like sum, for the purpose of adding to the library or the apparatus.

I have not seen the full text of this enactment, but in a newspaper article in which it is referred to as "one of the wisest and most beneficent" in the annals of New Jersey legislation, and proceeding from a "benignant and generous government," the proposed library is clearly expected to be of a popular character, for circulation among the pupils. "The books," says the journal in question, "would at once find greedy applicants in the country children, who are debarred the advantages enjoyed by the children in towns and cities; and," it goes on to say, "the incentive which it would give to the thirst for knowledge, and the intelligence which it would diffuse, is almost beyond conception." More than this: "We could devise no greater or more acceptable godsend to at least two-thirds of the school districts of this State."

Now, if this is a correct view of the intention of the framers of the law—and a Trenton newspaper ought to be well-informed on this point—our law-givers were neither so wise, nor their device so novel, as the writer from whom I have quoted imagined them to be. Nearly forty years ago the Superintendent of Public Schools in the State of New York advanced in his report a project of district school libraries exactly similar to that which has just been revived, and in 1835 authority was given to school districts to raise by tax \$20 for this purpose. They showed, however, the most complete indifference to this privilege—not because they were intelligent enough to perceive the futility of the scheme, but for the simple reason that school districts everywhere, and particularly the rural districts, are not in the habit of complaining that they cannot tax themselves as much as they would like in behalf of public instruction, but esteem themselves fortunate if not constrained by bribes or threats to be decently liberal in equipping and sustaining their schools. In New York, efforts certainly praiseworthy, however misdirected, were made to coax the districts into availing themselves of the permission accorded by law. Individuals came forward with offers to raise one-fourth of the required amount if the district would raise the remaining three-fourths; even public lectures were used to persuade the apathetic districts, but all in vain. The next step was more successful. In 1838 the Governor was got to recommend what was called after its passage “the glorious library law,” which appropriated \$53,000 annually for three years (afterwards extended to five), to be distributed to school districts that raised an equal amount by tax for school libraries. In 1840, says the author of the “Daily Public School in the United States,”\* to whom I am indebted for these particulars, nearly \$100,000 were expended for such libraries, filling the Superintendent’s breast with joy, and leading him to expect that in the course of five years “two millions of valuable books” would be in circulation “among those who most need them and are most unable to procure them,” and whose minds would “thus be diverted

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\* Philadelphia: J. B. Lippincott & Co., 1866.

from frivolous and injurious occupations, and employed upon the productions of the wise and learned of all ages." He too felt, like our Trenton editor, that it would be impossible "to set bounds to the mighty influence that would operate upon the moral and intellectual character of the State."

It is a very obvious reflection that if the district librarians are fairly chargeable with the present "moral and intellectual character" of New York State, the projector of them has little reason to be remembered with gratitude as a benefactor of mankind. In fact, however, the experiment early proved an entire failure. The school libraries which in 1858 numbered 1,402,253 volumes, numbered nearly 300,000 less in 1864, and their usefulness may be assumed to have diminished in a still larger ratio. The market which they opened for the sale of juvenile literature was a tempting one to both authors and publishers, and the quality of the supply which followed so extensive a demand may easily be guessed. Since their day not only has our literature undergone thorough change and marked improvement, but the newspaper and periodical have achieved an enormous development, affording the greatest variety of good reading, adapted to every capacity, and leaving nothing to be desired in amount or cheapness.

Just twenty years after New York had begun to be agitated on this subject, the Ohio legislature (in 1853) enacted that one-tenth of a mill on the dollar should be assessed on all the property taxable for State purposes, and the proceeds applied to the purchase of a library and apparatus for the common schools. The State Commissioner was to select them, the county auditor (through the township clerks) to distribute them, and the local school authorities to be responsible for their safe keeping and use. In 1860 this law was repealed, leaving the libraries of course *in statu quo*. Their status differed in different localities. In some, the books were in good condition "because not used," or "because locked up." In some, they were to be found in private libraries, where they had remained for years. In other places, not a few, the books remained in the original packages, having never been opened.

Again twenty years pass away, and New Jersey, appa-

rently profiting nothing by the experience of her sister States, revives the experiment which they have discarded. If this were the first occasion on which the terms "school library" and "philosophical apparatus" occurred together in legislation, we should be justified in thinking the books as well as the instruments designed to form part of the teacher's outfit—along with the globes, the wall-maps, and the blackboards. Against this, however, we seem to have the Ohio precedent, if I rightly interpret the word "apparatus" therein used; and must conclude that in the minds of our New Jersey legislators, the district libraries had no other distinct purpose than to serve as the nucleus of a public library, of which half-grown boys and girls were to be the principal if not the only patrons. Nor can we, on examination, allow the law even so much merit as might be asserted for it on the strength of the philosophical apparatus which it provides, or paves the way for procuring. If there can be any choice of the means by which money is wasted, it is hazarding nothing to say that the purchase of such apparatus is far more to be deprecated than that of a circulating library. For this judgment it will be sufficient to assign two reasons, viz., that in the present state of scientific instruction in our public schools the need of illustrative apparatus cannot be said to exist, nor are there teachers capable of using it to advantage; and that as lumber it is almost valueless, whereas paper is always worth something by the pound. Which of us who received his education at the East, in one of those grammar schools which are the pride of New England, does not remember the cabinet of philosophical toys—the air-pump and electrical machine conspicuous among the rest, with various paradoxical contrivances to illustrate the centre of gravity, such as the Leaning Tower of Pisa, and the horse and rider always rearing on the brink of a precipice but never toppling over, though weighed down with a curved wire and leaden ball at the end? Who does not remember how seldom during the term this cabinet was opened, and how few of its treasures explored—how few, I now fear, our teacher knew the use of at all? And who will ever forget his part at the annual exhibition in July—perhaps to make

ice by evaporation, with the thermometer at 90° and perspiration in every pore? or the cramming into him of the formula of the text-book, which he was supposed to speak from the most perfect comprehension not only of the laws governing the particular experiment, but of all natural laws ever dreamed of by committee-men?

Our Trenton editor is doubtless right, and the New Jersey statute is neither more nor less respectable in its intention than the unprofitable legislation on the same subject of New York and Ohio. Perhaps in all these instances some good has been or will have been done in favored communities, where a few men of intelligence and public spirit, having the will and leisure to attend to it, have selected the books. In the nature of the case, however, their enthusiasm and supervision cannot last always, and there comes a day when the collection makes no progress, becomes dead, and is neglected or dispersed. It is useless to enumerate the reasons why a school library for the pupils' sake should not be encouraged and cannot possibly succeed—at least for any length of time. I have already pointed out the competition which it has to endure with the cheap periodical literature of the day, and this alone would furnish a sufficient argument for condemning it. But we have still—we New-England Jerseymen—some interest in the question: Is the New Jersey statute utterly worthless, or worse than worthless? and ought we to strive to get it repealed? On the contrary, it seems to me capable of being turned to very good account, if we disregard the superfluous part of it—the “philosophical and chemical apparatus”—which is optional, and impart a new but not contradictory meaning to the remainder: the school library.

I spent half an hour, a few weeks since, in passing through the rooms of the Orange High and Grammar School, when not in session, with a view to spying out what provision existed for thorough instruction apart from the sum of knowledge comprehended in the text-book and the teacher's mind. I saw what I expected—all the approved arrangements for the comfort of the scholars, but almost none of the aids on which a teacher should rely to confirm or supplement his own knowledge, to correct or illustrate the text-

book, to economize his time by directing the pupil to seek for himself the information desired. In the little rack on each teacher's desk, I saw chiefly the books used in the recitations of the class, and as a rule (though I did not visit every room) the only book of reference was a Webster's Dictionary. If any other was observed, it had the appearance of being the teacher's personal property, not a part of the regular furniture of the school. I do not recall a single wall-map or globe, nor a single picture on the walls except a photograph of the school-building itself. The only ornament visible, except the posies that marked the affection of scholar for mistress, were a few drawings on the blackboard in colored chalk—one, I remember, of a cow as green as the grass she must have fed on. There were no cyclopædias, no dictionaries of language or of technics, no atlases better than the pupils themselves made use of. Apparently, the text-book was, for both the tutor and the taught, the be-all and end-all of education.

I say this not in reprobation of any person connected with the school in question, but in order to bring out as vividly as I can the need which I feel to be a pressing one in any school thus destitute of the higher resources of education. It is this weakness which the New Jersey law permits us to remove, and which I think it the duty of all who have at heart the development of our public schools to the highest possible perfection, to strive to remove. The late principal, as I am informed, was aware of the law providing for district school libraries, and last year succeeded in raising the twenty dollars which entitled his district to a subsidy from the State in like amount. I have been unable, however, to learn what disposition was made of the money thus earned, and can only conjecture, from my own observation, that it availed little to supply the great deficiency I have described.\* My object in reading this paper to-night is to urge the fitness of the New England Society to take the initiative in this matter for the present year. The Society has just passed its second anniversary, and has as yet done nothing to exhibit to the people of Orange that phase of its consti-

\* [NOTE BY THE WRITER.—I have since learned that a fair attempt was made to procure a library of reference, and that Appleton's Cyclopædia and perhaps other works were obtained.]



tution which is embodied in the Committee of Public Welfare. Meantime our funds have been slowly increasing, retarded only by our very light expenses, and we are quite in a condition to gratify any disposition we may have, to make the public our debtor. It was well understood, at the beginning, that our aid to useful enterprises would be less by downright gifts, covering the entire need, than by judicious conditional gifts calculated to stimulate others to their duty in the premises. It is in this way that I propose, and would formally move, that the Society act ; for the sake of procuring for the High and Grammar School a library of reference, together with such other aids to instruction (stereoscopes and photographic views, for example) as should properly accompany it. I would have the Society publicly announce at its meeting in October, that it will contribute fifty dollars towards this object, provided the community will raise forty—to which the State will then add ten, making a round hundred. I would further have it stipulated that this money should be expended under the direction of a Committee named by this Society, but including the principal of the High School, and at least one member of the Board of Education. And finally, I would follow the excellent example of a public library near Boston, and arrange for raising the forty dollars in small sums, to awaken as widespread an interest as possible,\*and bring home to the greatest number of persons a sense of their responsibility for the efficiency of our public schools.

I ask permission, Mr. President, to give notice now that I shall bring this subject up in October, and endeavor to obtain the above-mentioned appropriation of fifty dollars, subject to the conditions already set forth.—[*A paper read before the New England Society of Orange, N. Y., June 13, 1872.*]

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IF you would not be thought a fool in others' conceit, be not wise in your own ; he that trusts to his own wisdom, proclaims his own folly ; he is truly wise that shall appear so, that hath folly enough to be thought not worldly wise, or wisdom enough to see his own folly.

*THE HOFUYL SCHOOL.*

THE agricultural and educational establishment founded by M. de Fellenberg, at Hofuyl (a league and a half from Berne), has acquired great celebrity. We visited it yesterday for the first time. M. de Fellenberg, who was walking in the shade of the trees near the house, with some of his pupils, was the first person we met. Being at leisure, a rare circumstance with him, he had the goodness to show us over the establishment and explain its working himself. To avail ourselves as far as possible of his kindness, we spent the evening at Hofuyl, and slept in the vicinity. Agriculture was not my principal object: it will therefore suffice to say, that I noticed well-kept fields, where not a weed was to be seen, and fine meadows which fifteen years before were a vast turf bog. M. de Fellenberg performed an admirable work in draining this swamp; the stagnant waters saturating the soil now flow over its surface, irrigating the fields they formerly drowned. Every four years the land is turned up with an exceedingly strong plow, formerly drawn by fourteen horses, and removing stones at a depth of two feet, but now requiring only six. It is possible that this process would not succeed everywhere, for there are few general rules in agriculture unsusceptible of local exceptions. The buildings of all kinds are in the best condition.

My curiosity was now attracted by a troop of young boys returning from the fields, with their working implements in their hands, and following a man of about thirty. They greeted M. de Fellenberg with a nod and a smile as they passed. We followed the troop of young workmen to their dwelling, a low house, very unpretentious, fifty paces from that of M. de Fellenberg. They were about forty in number, between the ages of eight and eighteen, dressed in short jackets and trowsers of coarse cotton cloth, their feet and heads bare, but appearing perfectly contented and healthy. Their apartments, on the first story, consist of two large rooms, one, the dormitory, provided with mattresses, sheets and blankets on a platform along the walls, as in a guard-house (*corps-de-garde*), the whole very clean; the other is

furnished with two long tables with their forms, and several cupboards, in which the pupils arrange their collections of plants, specimens of soils and rocks, mechanical drawings, etc. When the weather is very hot, they take their meals in a shed near the house.

While waiting for supper, the young man, the leader of the troop, whose name is Vehrli, intoned a national, historical and religious hymn, which the pupils sang in parts, with great precision, thus showing themselves to be as good musicians as they were industrious laborers. For supper they had soup, vegetables and milk, after which they amused themselves with various games, wherein the mind took greater part than the body, inasmuch as the labors of the day furnish sufficient exercise for the latter. The game we witnessed consisted of guessing a thought from a given number of questions. Reading aloud followed; three grammatical and arithmetical questions were proposed, in which the pupils appeared to take great interest, and generally answered very correctly: the calculations were made mentally. After we had retired we heard them singing some time longer; the voices, however, insensibly died away, and before nine o'clock, all these young people were in bed, having to rise at five in the morning. The pupils begin the day with a lesson of half an hour, breakfast in much the same manner as they supped, work in the fields from six to twelve, dine, have an hour's lesson and return to the fields till six. On Sundays, the lessons occupy six instead of two hours: they have meat on that day alone. A perfect simplicity was observable in all I saw; nothing theatrical, no attempt to shine at the expense of others. The pupils did not seem to perceive that they were being looked at, and the presence of M. de Fellenberg imposed no restraint on them. Such were my first impressions of what I saw at Hofuyl; I will return to the subject of the school for the poor, a *school of industry* as it is called.

M. de Fellenberg's house is regular and of good appearance; when we entered a great number of young people of the *high school* were assembled. The greater number of them belong to the first families of Germany, Russia and Switzerland. Madame de Fellenberg, who, with the best

grace in the world, shares the sacrifice made by her husband, of the enjoyments of the high society in which they were both born, and the duties he has imposed on himself, had the kindness to retain us for supper.

A large table in the shape of a horse-shoe, occupied three sides of a large hall. Seventy or eighty young men, several professors and the family of M. de Fellenberg took their seats at it. The repast was abundant and simple, the pupils conversing freely with each other. We took leave of M. de Fellenberg, full of interest for an establishment, respecting which we had received much information, and of which we could foresee the importance. I intend to read the different reports which have been drawn up, so as to guide my inquiries when I return here with more leisure at my command. I will then give the results.

\* \* \* \* \*

The short visit I made last year to Hofuyl, having only sharpened my curiosity, I did not fail to return, better prepared to inspect the establishment of M. de Fellenberg with profit. He was so good as to reply to all the questions I asked during my several visits to him, and to furnish me with all the accounts and information I required. This extraordinary man first became known as a skilful agriculturist, and he has still an agricultural institute at the chateau of Bucksee near Hofuyl, but agriculture was always a secondary object with him, and the hope of rendering it a means of education for the people, gave it its greatest importance in his eyes. And truly, though the improvement of agriculture tends to increase the number of men, education alone can render them better and happier. Gifted with a generous and ardent character, M. de Fellenberg adopted at an early age, the principles of that liberalism, which was soon to be so cruelly abused. The disappointment he felt at a result so contrary to his hopes, gave him the most unfavorable opinion of the moral state of mankind; but he none the less clung to the hope that an improved system of education might yet save it. An accidental circumstance which would have made less impression on a mind more habituated to worldly affairs, and otherwise disposed, decided M. de Fellenberg's vocation for ever. Attached to

the Swiss Legation (at Paris), after the French invasion he had a conversation with Rewbel, at his country house at Areneil, near Paris, in the course of which he (M. de Fellenberg) represented the afflicted state of his country, and the danger that would result; independently of all considerations of justice, from exciting a man like that of La Vendée, equally disastrous to both parties. The Director appeared to listen with attention, and M. de Fellenberg began to flatter himself that he had made some impression on his mind, and even awakened sentiments of humanity in his heart, when suddenly interrupting the touching speech and his own reflections alike, he called a servant who was passing, and told him to bring a basket containing a favorite spaniel and its pups, and it became at once impossible to withdraw his attention from them, or even to believe that it had been for an instant awakened. "Entirely disgusted with diplomacy," said M. de Fellenberg, from whom I had the anecdote; "I took leave of a spot and career to which I was so unsuited, resolved to undertake the long and laborious work of an elementary reform, by means of education, and to persevere in it all my life."

His was to prove, by an experiment on a large scale, that the children of the poor can, by a better employment of their time, cultivate their understandings and provide for their wants at the same time, so that at twenty-one years of age a young man should be well educated and able to earn his living, having already reimbursed his family for the cost of his education and maintenance. The peasants of his neighborhood at first were little disposed to submit their children to the experiment, but M. de Fellenberg had foreseen the obstacles he would have to encounter from them: he required pupils of whom he would be the master, and he took them, where he could, sometimes from begging on the highway. He had the good fortune to find an able coadjutor in a young man of the name of Vehrli, the son of a school-master of Thurgovie, who came to Hofuyl in 1809, to inspect the establishment, and was so struck with M. de Fellenberg's plan, that he offered his son, then a bright eighteen year old, as assistant. This young man, at first admitted to the table of M. de Fellenberg, soon left it for

that of the pupils, whom since then he has never quitted day or night ; working with them in the fields, sharing their sports and learning himself what he had to teach. His zeal has not flagged for an instant during ten years of exertion. The number of pupils is at present thirty-nine : they are treated as they would be at home, their obedience is of a filial character, and there has scarcely ever been need of any punishment.

I have already given an account of the distribution of their time. The pupils are divided into three classes, according to age and strength : the work of each class is entered every evening into a book, specifying the kind of labor, so as to place the value to the debit of such and such crop, such and such a building, to the cattle, the machine making, etc. The work of the first class (the youngest) is calculated at half a kreutzer per hour, that of the second at a kreutzer, and that of the third at two kreutzers. The day's work (ten hours) of a pupil of the third class is thus paid at 20 kreutzers (15 French sous, or American cents) whilst the day's work of a laborer is worth 24 sous. Thus the worth of the work is far from being exaggerated. In winter, when there is nothing to do in the fields, the pupils are employed in sedentary occupations, such as plating straw for chairs, basket-making, sawing and splitting wood, thrashing grain, grinding paints, helping the wheelwright, carpenter, or other handicraftsmen dwelling at Hofuyl.—*Translated from M. Simon's Voyage en Suisse.*

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At the last meeting of the Trustees of the Boston University, it was decided to open a College of Music, adapted to the wants of graduates of musical conservatories and academies, and provided with higher and more varied facilities for musical education than have hitherto been obtainable in this country. Dr. E. Tourjee was elected Dean of the Faculty. The course of instruction laid out covers a period of three years.

*GEOGRAPHICAL NOTES.*

UNITED STATES.—Extensive diamond fields which, whatever may be the value of their products, seem likely to offer a wild career to speculation, have been announced rather vaguely as existing near the headwaters of the Rio Colorado Chiquito (Little Colorado), a stream which actually takes its rise in New Mexico, but for the most part flows through Arizona north-westerly from the 34th parallel (long. 109° W.) Diamonds, rubies, sapphires, and emeralds, it is said, have already been obtained in satisfactory quantities, and we hear of the formation of a San Francisco and New York Mining Company, with a capital of ten millions. The diamonds compare favorably with those derived from South America and South Africa. Rubies have also been found near Prescott, in Arizona, and the foot-hills of the Pinal Mountains (north of the Gila) are also alleged to be the true seat of the diamond diggings. From New Mexico, on the borders of Arizona, in what are called the Ant Hills, "several pints of precious and doubtful stones" have been brought in by a party making a geological expedition from Fort Wingate to Albuquerque. What with gold and diamond hunters it is certain that Arizona will shortly be opened up for settlement, and we may expect rich additions not only to geography but also to archæology, as the whole region we have indicated abounds in remains of an ancient civilization. A map of lower Arizona and New Mexico, embracing the locality of the reported mines, is contained in Pumpelly's "Across America and Asia" (New York: Holt & Williams).

—A member of the Yellowstone Expedition now in progress gives the following list of the personnel :

Dr. F. V. Hayden, U. S. geologist; has been in that department sixteen years, and has also completed a geological survey of Nebraska, county by county. His mother and one sister now reside at Rochester, N. Y. Mr. James Stevenson has been with Dr. Hayden seventeen years, and probably has as much knowledge of the Rocky Mountains as any man living. He is well acquainted with the fellow travelers of Capt. Bonneville, so eloquently described by Washington

Irving, as well as all the Indian tribes within the range as far north as Dakota. Without Mr. Stevenson a trip of this kind would be next to impossible, as he is an experienced packer and is well versed in the scientific objects of the expedition. Adams, reporter of the *Herald* and the *Times* of New York, and the *Enquirer* of Philadelphia, from Philadelphia, Pa. Prof. Bradley, Knoxville, Tenn., assistant geologist. He will take charge of the geology of the Snake River country. Beckler, topographer, Pennsylvania. Beveridge, assistant topographer, son of Col. Beveridge, Chicago, Illinois. Brown, assistant, District Columbia; Burck, topographer, New York, and was assistant engineer under Gov. Walker on the Southern Pacific Railway Survey; Jackson, photographer, New York; Campbell, assistant photographer, Omaha, Nebraska; Carrington, ichthyologist, Virginia; Coulter, botanist, Maryland; Easlack, assistant meteorologist, Philadelphia, Pa.; Herring, topographer, Pennsylvania, and engineer on Fairmount Park, Philadelphia; Holmes, artist, District Columbia; Jacox, assistant ornithologist, New York; Merriam, ornithologist, New York, and son of Congressman Merriam, Lewis county, New York; Logan, secretary to expedition, and nephew to Senator Logan, of Illinois; Jones, assistant, Rochester, and nephew to Dr. Hayden; Negley, assistant, Pittsburgh, Pa., son of Congressman Negley, and graduate of naval school, Annapolis; Nicholson, meteorologist, District Columbia; Platt, assistant ornithologist, Waterbury, Conn.; Dr. Peale, mineralogist, Philadelphia, Pa.; Savage, assistant, Lawrence, Kas.; Spencer, guest, St. Paul, Minn., and nephew of Longford, commissioner of Yellowstone Park; Taggart, assistant, Ohio; West, assistant, Ohio, and son of Judge West, of the Supreme Court of Ohio; Gonnet, astronomer, Massachusetts; Prof. Wakefield, assistant astronomer, Ohio.

ASIA.—Who has not sympathized with the map colorist, obliged, in times not so long past, to mark with his brush the kingdoms, principalities, palatinates, counties, duchies, and enclaves innumerable of divided Germany, where now one broad splash of blue or yellow paint suffices? His improved condition is visible also in United Italy; and even the vast political areas of Asia promise to become still vaster and simpler for him to designate. Indeed, it will soon be (all but historically) absurd to bound our maps of Europe by the Ural Mountains and the Caspian, when, if we give the Russian Cæsar his due, we shall picture his undivided domain as extending from the Baltic to the Pacific, and forming part of a grand division once the smallest of all but now competing with Asia itself—or what is left of the Asia of the atlases of the present day. The Russian Empire



at this moment practically contains, besides Siberia, the whole of Turkestan, a large part of Soongaria, and an indefinite part of Mantchooria; and those who pretend to divine the purpose of the Muscovite Government predict also the speedy absorption of Afghanistan and Corea. In short, the Empire of the near future may embrace all of Asia lying north of the 40th parallel (*i. e.* north of Pekin and Cashgar) with as much of Turkestan as lies south of it, and whatever other territory may have been acquired beyond the Hindoo-Koosh Mountains. We shall attempt a brief outline of the order and extent of the later acquisitions.

By imperial decree of March 1, 1866, the southern boundary of Russian Turkestan was declared to run from the Sea of Aral to Lake Issik-Kuk. In 1868 Khudayar Khan, the ruler of Khokan, having been defeated in battle by the Russians at Tashkend, ceded them a significant part of his territory, and entered into a commercial treaty satisfactory to the conquerors. In 1869 Mozaffer-Eddin Khan, emir of Bokhara, was defeated at Samarcand, and towards the close of the year humbly sought at St. Petersburg a treaty of peace and friendship. Khokan and Bokhara thus became in effect Russian provinces, if nominally still independent. In 1869-'70 the Russians were occupied in suppressing a rebellion of the Don Cossacks, which was fostered by emissaries of the Khan of Khiva. In November of the following year this chief surprised a Russian camp on the shores of the Caspian, taking a number of prisoners, and further hostilities seemed inevitable, threatening no little danger to the Russian establishment. Jacob Beg, the usurper of Cashgar, just over the border, invited to league with himself against the Russians the Emir of Bokhara, who accepted, and the Khan of Khokan, who declined, and was making overtures to the willing Khan of Khiva, when the latter's disposition was suddenly changed by the intrigues of Gen. Kaufmann, the Governor of Russian Turcomania, in favor of already existing disaffection among the Khan's own subjects. In April last he was so far convinced of the Russian superiority in the game, that he liberated all the Russian prisoners, and assented to a treaty of commerce, allowing free trade to Russian merchants throughout his khanate, and guarantee-

ing protection to caravans. By this act he opens to the Russians the entire course of the Amu or Oxus River, and permits direct communication between Orenburg and Afghanistan.

The Russians have at several points, during the past decade, encroached upon the great central area known as Chinese Tartary. On the 22d of July, 1871, they occupied the district of Kouldja, in Soongaria—a fertile oasis, surrounded by mountains (except on the west), and abounding in living waters, with a desert only in the centre, just touching the River Ili, which traverses the district. The products of the soil are rice, millet, grapes, apples, apricots, melons, etc.; the timber is fine and varied, and there are sufficient coal deposits. The Chinese occupied this valley in 1757, exterminating the inhabitants and introducing a motley colony, which revolted in 1825 and again in 1865, this last time securing their independence. The Tarantches (Turks), who number about two-fifths of the total population (102,000), were in 1867 accepted as rulers. To these the Russians now succeed. Coastwise, similar advances have been made and are still making. Saghalien, of which only the northern end was yielded to the Russians by the treaty of 1867, has now been entirely occupied and fortified; and the Japanese, so far from resisting, have struck up a peculiar intimacy with its powerful neighbor, and formed an alliance, offensive and defensive, that may yet produce grave complications in eastern waters. On the mainland, Russian Mantchooria, extending southward from the inhospitable and humid banks of the Amoor, must be considered to have a fluctuating and unsettled border, which Coreans and Chinese immigrants are crossing in great numbers. Of its harbors, Vladivostok is the best, and likely to outstrip in importance the northern port Nicolaievsk. The cable connecting Japan and Siberia lands at the former place. The water which went on our maps under the name of the channel of Tartary, has, since its acquisition by Russia, in the treaty with China concluded by Gen. Ignatieff Nov. 2, 1860, been denominated the Gulf of Peter the Great. It is really a succession of six great gulfs along a coast a thousand miles or more in extent, and affording twenty excellent harbors, capable of receiving

ships of the first-class in all weathers and almost in all seasons. The first Russian settlements in this region date from 1864. Rains are very frequent and the air full of moisture, the effect on vegetation being equivalent to six degrees difference in latitude northward. But little snow falls about the Gulf, and not all the ports are frozen in winter. Rainy and foggy days average 160 out of 365.

—From *Ausland* we quote the following picture of Samarcand, under the Russian régime :

"At Samarcand, the Russian soldiers naturally live in the citadel, but the General in the city, under the protection of the fortress, it is true, and near enough to take refuge in it in an instant. Samarcand is peaceful, for its inhabitants know that the citadel has been so fortified as to defy all the efforts of the Bokharian army. The fort, the Emir's palace, the Bey's palace, have almost wholly lost their oriental aspect. The Emir's residence has been converted into a hospital and a quartermaster's depot, and several officers are established in the Bey's dwelling. One of the mosques has become an orthodox Greek church. . . . What is (or was) most wanting in this famous city is merchants, in the European sense of the word. There were many who bore this name, but they sold only trifles—toilet articles, children's toys, women's goods. Nothing could be had of them that was needed for daily subsistence. After long waiting, the things desired made their appearance, but were either not usable or extravagantly dear, and sometimes both. At last a kind of restaurant was started, and there are now two bakers—a German and a Tartar. Later still arrived a conjurer ; then, two or three months afterwards, an Italian with a hurdy-gurdy and a monkey."

—A. P. Fedchenko, a Russian traveler, made last summer an important journey in Central Asia, and letters from him were published in the *Turkestanskaia Vidomoski* (founded 1870), at Tashkend. We append the *Academy's* abstract of the fuller narrative compiled for Petermann's *Mittheilungen* :

"Fedchenko entered the diminished Khanate of Khokan from Kojend, in the Russian province of Turkestan, and at an audience granted by the Khan at the capital city he obtained a written permission to travel in the Khanate. From the city of Khokan the traveler first went southward by Ispara, on the way which leads through the mountains to the principality of Karategin ; but the passes in this direction were closed to the Khokandians through a rebellion of the Kirghiz. Fedchenko describes the head of the Ispara valley as an extensive circus, on the southern side of which eight

peaks rise to a height of from 18,000 to 19,000 feet ; between each of these a great glacier with side moraines sinks into the valley, descending to a level of about 10,000 feet above the sea. The pass to Karategin is over one of these glaciers. From this the route lay across the high spurs of the mountains which bound the Khanate, south-eastward to where a side valley of the Syr Daria, that of the Kurshab, a small tributary, leads up to the most important pass of the whole region, the Terek-Dawan, on the highway to Cashgar and Eastern Turkestan. The Terek pass is scattered over with great stones to such an extent that it can only be used for traffic in winter, when the snow has filled up the spaces between these. In summer the caravans take a more circuitous route by a side pass. The summit of the Terek, looking down towards Cashgar, appears to have been the extreme limit of the journey."

AFRICA.—The traveler Haverland tells the story that, during the Crimean war, a large number of Boers of the Transvaal fancied they were undertaking a slight march when they set out for the north in the hope of arriving in time to help the Russians deliver the Holy land. They did not desist till they had lost all their animals from fatigue and the attacks of the tsetse fly. The northward longing still affects the Boers, who are little more than nomads. About 100 families have recently accepted an invitation of the Portuguese government to found a colony on the banks of the Zambesi. The total value of the diamonds discovered in the valley of the Vaal up to the end of 1870, is put at \$1,100,000.

—In a letter to his brother John, a resident of Listowell, Ontario, Dr. Livingstone gives some particulars which we have not observed in his other letters or in Stanley's. Thus he says:

"Lake Bangweolo, at the lowest estimate, is 150 miles long, and I tried to cross it and measure its breadth exactly. The first stage was to an inhabited island, twenty-four miles. The second stage could be seen from its highest point, or rather the tops of the trees upon it, evidently lifted up by mirage. The third stage, the mainland, was said to be as far beyond ; but my canoe men had stolen the canoe, and they got a hint that the real owners were in pursuit, and got into a flurry to return home. Oh that they would ! But I had only my coverlet left to hire another craft, and the lake being four hundred feet above the sea, it was very cold ; so I gave in and went back, but I believe the breadth to be between sixty and seventy miles."

Mr. Stanley, who has been handsomely fêted in England, intends publishing a narrative of his African adventures, which will make, it is said, an octavo volume of 500 pages, illustrated with maps and sketches. Scribner, Armstrong & Co., of this city, will be the American publishers of the work.

*Cartography.*—The results of elaborate investigations of the geography of Southern Arabia, made during a long residence in the neighborhood of Aden, by Freiherr von Maltzan, are published in the *Mittheilungen*. Von Maltzan obtained his knowledge for the most part by a regular system of examination of every traveler arriving by any of the routes which centre in Aden; and by comparing the accounts thus received with the descriptions given in the manuscript work of the Arabian geographer "El Hamdani," a copy of which he was fortunate enough to find in Aden. In this way he has been able to map out a region of the country stretching north and eastward almost equal in extent to Bavaria. When studied along with the journeys of von Wrede, Munzinger, and Miles, the map forms a most valuable addition to geography, by filling up a space which hitherto was a perfect blank. (*Academy*, May 15.) The last census gives Aden a population of 35,000 inhabitants.

—Important improvements in the map of Turkey are promised, in consequence of a railroad to be opened from Belgrade to Salonica *via* Uskup; from the travels of a Mr. Kanitz in Bulgaria; and from the continuation to the Sea of Marmora of the Russian measurement of the meridian of Lapland, which last will afford the basis for a trigonometrical survey of Eastern Roumelia (ancient Thrace).

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IN the average height of mountain ranges Switzerland does not compare with Colorado, or, for that matter, with any Western territory. The mean height of the Alps is from 8,000 to 9,000 feet above the sea. The mean height of the Rocky Mountains is from 10,000 to 12,000 feet. This is the mean height of the immense continental sweep of the Cordillera de la Sierra Madre. It is probable that the average height in Colorado, which is the table-land of the continent, will approach very nearly to 12,000 feet.

*CORPORAL PUNISHMENT AS A MEANS OF  
SCHOOL GOVERNMENT.*

## v.

BY COMMON consent and immemorial custom, the right to use the rod as a means of producing individual reformation or establishing general obedience, is vested in the teacher. In this respect, as stated in a former paper, he is understood to be endowed with the same power over the pupils in school as that which the law recognizes in their parents out of school. When all other means of reformation have failed, it is meet, right, and the teacher's bounden duty to judiciously test "the virtues of the rod," no matter how disagreeable the task may be. Corporal punishment undoubtedly should be the last resort, but when used it should be continued (or resumed at short intervals) until it produces the desired result. The infliction of corporal punishment is more effectual in most instances and, considering the future prospects of the refractory, it is far more humane than temporary suspension or total expulsion from school. We do not advocate frequent corrections of this sort: on the contrary, we believe that, as a rule, those children do best who are seldom subjected to blows. We recommend "the use, but not the abuse of the rod." When not being used, this instrument should not be exposed to view. The teacher should not carry it with him "on his rounds" through the school. He should remember that its constant appearance, with frequent, slight, and random application will familiarize the pupils with its terrors, and cause the more evil-disposed to regard it with contempt. Nothing could be so pernicious as the promiscuous use of the rod. This instrument should not be regarded as a universal remedy to be applied for all transgressions—small and large. A child should not be corrected with two or three lashes for a fault, and the same repeated on every repetition of a like offence. The rod should be specially reserved for the greater and more heinous offences. Its judicious use requires a nice discrimination and a careful study of the delinquent's temper—implying considerable skill, caution and judgment in the

teacher, as well as a correct estimate of the offender's character and fault. Ill-ordered or ill-deserved correction does more harm than good, as it tends to make the refractory more perverse and intractable. Let the pupil get the benefit of any doubt that may arise during an investigation as to his guilt. "Better to pardon ninety and nine offenders, than to punish one innocent child." If we err at all, let us be sure to err on the side of mercy. Moreover, we must always remember that if punishment fails to do good it is sure to do harm. If it be not made to reach the mind and bend the will, it only hardens and injures the offender. It would be far better never to attempt to inflict corporal punishment than that it should fail in design—prove ineffectual or soon need repetition. All punishments are for amendment or example—for reformation of the offender or the detention of others from committing like offences. Sometimes these two motives are united, and then the punishment is doubly just and proper. In either case, legitimate authority having praiseworthy objects in view inflicts legitimate punishment to accomplish legitimate ends. This is done in love, and because the little sufferer is beloved. Were it otherwise the teacher would be a tyrant and the pupil a martyr. Punishments should be few and far between, for as Seneca well observes, "it is as discreditable for a teacher to have too many of them as it is for a prince to have too many executions, or a physician to have too many funerals." "The pain of the rod," (says Locke,) "on the first occasion that requires it—continued and increased till it has thoroughly prevailed—should first bend the mind and settle the teacher's (or parent's) authority; and then gravity, mixed with kindness, should keep it for ever after." If the teacher can only succeed in thoroughly establishing his authority at school in the first instance, his efforts as an educator are almost sure of being successful. Good discipline is essential to good teaching, and may be said to form the fundamental basis of education.

The major offences—generally known as disobedience, perverseness of disposition, obstinacy, rebellion, and wilful neglect, are those which need repression by the use of the rod. Kindness and forbearance on the part of the teacher

would be regarded as weakness by pupils guilty of these faults. Force is the only influence they will respect—at least at the outset. For this reason such offenders must be thoroughly mastered by whipping, prolonged until the chastisement reaches the mind, bends the will, and produces the desired effect by exciting shame, sorrow and repentance; the great object of all punishment. Attendance at school implies submission to authority, and authority requires sanctions. The teacher could have no right to command unless he also had the right to enforce obedience. The penalties attached to wilful transgressions administered equally and regularly—and without passion, caprice, hesitation or mitigation—lead pupils to feel that pain and shame are sure to overtake the evil doer. Discipline will be easy and effective when the pupils have once made up their minds that the teacher's commands *must* be obeyed. We may here remark, that when children are punished, the degree of correction should not be measured altogether by the magnitude of their offence, but rather by the amount of opposition indicated by the offence towards the rules of the school and authority of the teacher—by the root whence it sprang and the habit it tends to establish. If possible, let things be so ordered that the pupil will consider the shame of being whipped a greater punishment than the pain caused by the rod. Shame of giving offence and of the disgrace attending it are wholesome restraints on juvenile conduct. Without exhibiting a will of his own and an unalterable tenacity of purpose, a teacher will seldom be able to win the esteem of his pupils; and unless he gains their esteem he can never enjoy their love. Without their love or affectionate regard he cannot reckon on their prompt or implicit obedience, except as the result of fear or force. A teacher on taking charge of a school, may not be able to win the love (and thus secure the obedience) of all his pupils for many weeks or perhaps months. It would be very foolish of him in such a case, to ignore the use of the rod, and thus allow those desirous of being troublesome to run riot, and set a pernicious example to the remainder while he is experimenting on the virtues of moral suasion. On the contrary, let him first establish his authority by force—if necessary—and then rely on “softer means” if so



disposed. Otherwise, things would be sure to go on from bad to worse; "the sickly sheep would infect the flock," and the trustees have to call in a new physician and pay the old one off. A ruler abolishing fines, prisons, and capital punishment would soon have no country to rule, no servants to obey him, no friends to love him—all would be confusion; riot and bloodshed. So of a teacher who, on finding that he had no immediate prospect of successfully establishing his authority by reason and love, would decline or delay to do so by force. Order being once established, and thorough obedience secured, he will have to resort to the rod but seldom. On taking charge of a school, if he find that the pupils disrespect the immortal principles of law and order and abuse their freedom, we would advise him to act promptly, and do as governments do in like cases—"suspend the constitution (so to speak) and rule by martial law." Habits of order, attention, and implicit obedience promulgated and once adopted by the school, his appeals to higher motives than fear or force will seldom fail. "He can then rule by the power of reciprocal affection, and rely for success on the finer feelings of human nature." These will carry conviction to the heart through the medium of the conscience. But it is evident he must establish his authority by force—if necessary—long before he could justly be expected to exact or receive obedience as the result of affection.

Teachers should be particularly careful not to threaten their pupils. If a boy be innocent no one has a right to threaten him: if guilty, justice or good example demand his punishment. The ruler who continually threatens his subjects not only alienates their affections, but is sure of being despised and hated—they will detest his prison, scoff at his words, and ultimately deprive him of all power, if not of his head. The man who strikes when he has just cause—and without the notice of a threat—is the person whom people obey, honor, and respect. The dog that barks the most and the loudest, is not the soonest dog to bite. Children learn as if by instinct that the loudest talker is usually the weakest and smallest actor, and that the decision and firmness of a man of many words are confined to his tongue. This may induce them to dislike his person, to despise his

teachings, and to disobey his commands, and for these reasons he should never make use of threats.

As a rule, corporal punishment should be inflicted on the hands with a cane of moderate thickness. For many reasons, the head and certain other parts of the body should be exempt from blows. But it may be asked—"What is to be done should the delinquent resist the teacher or decline to receive his punishment on the hands?" There are two solutions for such a difficulty. According to the first the refractory pupil must be punished on the back or legs until he consents to apologize, in writing, for resisting the teacher, and expresses his willingness to accept his chastisement in the usual way: after which, the teacher may allow him a respite to write the apology, and then inflict the original punishment on his hands as designed at the commencement. Having honorably submitted to his punishment, the teacher may again restore him to favor. Such an example will have a powerful effect on the school, and, if judiciously and effectually performed, will never need repetition. The second solution though apparently more humane is far more terrible, taking the future prospects of the pupil into consideration. According to it, the refractory pupil must be temporarily suspended or totally expelled from the school. The latter plan is more suitable than the former for pupils of an adult age. Corporal punishment should be inflicted in the presence of the whole school, and in as solemn a manner as possible; so that it may not only reform the offender, but deter others from committing similar offences. Inflicted privately, its deterring influence is lost to the school, whilst the pain and disgrace to the sufferer remain unaltered. Besides, its public infliction renders misrepresentation of the teacher impossible, and its severity cannot be exaggerated to parents nor ridiculed to companions. Dozens of anxious eyes will witness its application, so that nothing can be mis-stated or erroneously reported. If administered in private, either or all of these things might happen.

It frequently happens that boys of an obstinate disposition and a certain degree of fortitude, will submit to "almost any amount of continuous punishment" in presence of their companions without indicating the least sense of pain,

sorrow or regret—thinking doubtless that it is more manly to bear correction well than never to have deserved it. The chastisement is continued probably until the sufferer gets “black in the face,” but his stubborn will remains unbent, and at last the teacher, “for the sake of humanity,” sends “the unconquered hero” to his seat, where he is received doubtless with mingled though suppressed feelings of sympathy and admiration. The punishment—though ultra severe—has failed in its object. It has done much harm but no good. It has hardened the offender and, through him, the whole school. The result of “the encounter” has made each pupil feel that if able to bear a similar punishment without flinching, he also might become a “martyr” and not only defy the teacher but force him to “cry quits,” as boys say. We may be asked, “What is to be done in such a case?” We reply that the refractory pupil must be conquered at all hazards or forthwith expelled. Punishment administered in private would be more effectual than public correction in reducing the will of such an offender. But for reasons before mentioned we would not recommend such a course. By comparing the result of our own experience with such light as we have been able to obtain in the writings of other educators, we are induced to believe that corporal punishment not continuous but inflicted at intervals will succeed in conquering the obstinate will of such an offender so as to ensure his penitent submission. When the teacher finds that he has to deal with such an extraordinary case, let him, after pointing out the gravity of the offence, inflict punishment sufficient to reduce the will of an ordinary offender. Let him, then, admonish the boy, alluding to the reprehensible nature of his offence, the disgrace attending its punishment, the duties of obedience, and the manliness of character which impels brave men not only to confess a fault but to conquer even their own follies. At the same time let the offender be given to understand that part of his punishment has been suspended to allow him an opportunity for reflection, and that it will be inflicted by instalments at certain short intervals until he thinks proper not only to apologize for his offence but also to express his sorrow and sincere regret at its occurrence, and his earnest desire to do better in future.

After being thus admonished, another instalment of the punishment, equal to, if not greater than the first, must be administered. The teacher may then reason with him again, and allow him sometime for reflection. When the prescribed time has expired, if still refractory, the punishment must be resumed—another instalment equal to, if not greater than the last, being inflicted, and so on, the intervals for punishment and reflection succeeding each other alternately until the offender, conscious of his fault, becomes penitent, and, melting in true sorrow at his guilt, requests permission to express his regret for the past, as well as his desire to do better for the future. This apology should be presented to the teacher, duly signed, accompanied by a request that he may be pleased to pardon and restore the penitent to favor. The teacher should then write the nature of the offence and punishment on the back of this paper, and affixing the date, file it for future reference. Such a punishment, coolly, calmly, judiciously, and effectually administered will never need repetition. It will have a salutary and an enduring influence on the whole school. If the amount of punishment be too little, it is sure to be ineffectual, and will therefore do more harm than good; and to prevent punishment being too much it should instantly terminate when by the pupil's submission it becomes apparent that the correction has reached his mind. "Whenever children are punished," (says Locke), "it should be done without passion, soberly yet effectually, laying on the blows, and smart, not furiously and all at once, but slowly, with reasoning between, and observation how it wrought, stopping when it has made them pliant, penitent, and yielding."

Quiet, cool, deliberate, long-forbearing justice is a fundamental element of success in school government. When about to inflict corporal punishment, the teacher should remember that one thoughtless word, one hasty or unjust blow, may nullify the laborious inculcations of many days. He should not be in a hurry—he should be calm, self-possessed and free from anger, while at the same time exhibiting a just sense of the reprehensible nature of the offence. If he be not free from anger let him defer the punishment—nothing should induce him to undertake its infliction.

Indeed it will always be wise to allow some time to elapse—a few hours at least, a day or two at most—from the investigation of an offence and delivery of judgment until the infliction of punishment. The offender, in the interval, will have time to reflect on the nature of his “crime” and the justice of his sentence, and may perhaps become truly penitent. Thoroughly understanding the teacher’s character, and being instructed by experience that silence and delay do not mean exemption, he will feel assured that nothing will arrest the course of justice except due contrition and reformation—a timely amendment and the exhibition of a heartfelt repentance.

On a certain occasion the great teacher Plato was about to strike one of his slaves, but “while his hand was in the air,” he suddenly checked himself, still retaining it in its elevated and menacing position. The poor slave after some hesitation ran away, but his master stood “fixed to the spot,” as if he were a statue. An intimate friend having observed this transaction, asked the philosopher what he meant by such singular conduct? “I am now,” (said he,) “chastising an angry man.” He had postponed his slave’s punishment, and was punishing himself for giving way to anger. Seneca relates that on another occasion this same slave committed some offence for which Plato thought it advisable to administer corporal punishment: but being under the influence of anger, he addressed his friend Speusippus, who happened to be near, saying—“Do thou chastise that fellow, I am angry and might go farther than becomes me.” This is the spirit we would commend. The modern teacher, like his Grecian predecessor, *should never inflict punishment while under the influence of anger*. It is true, he cannot, like Plato, delegate his power to another; but he can stop his uplifted hand and allow the offender time to repent and his own anger time to evaporate.

The divine Seneca, in his “Cautions against Anger,” advances many useful hints concerning the education of children. Ere concluding this article, we will take the liberty of transcribing a few of them, which may probably be interesting and useful to parents and teachers. The noble Roman affirms that—“A careful education is a great matter in

enabling us to conquer our evil propensities; for our minds are easily formed in youth, but bad habits once acquired are difficult to cure. Children should be trained to avoid provocations and the beginnings of anger. Nothing breeds anger more than a soft effeminate education. The choice of a healthy nurse and a good-natured tutor goes a great way in eliminating its germs from the system, for the sweetness of the blood and the manners will pass into the child. The teacher's favorite or mother's darling seldom comes to good. Flattery and fortune nourish touchiness, and as he grows up he becomes a choleric coxcomb. It is a very nice point to check the seeds of anger in a child so as not to take off his edge or quench his spirits. In this great care must be taken that he be neither too much emboldened by license nor too much depressed by severity. Commendations give him confidence and courage; but if dispensed to excess, they seldom fail to promote a spirit of insolence or intolerance." Parents, friends, or teachers should "never put the child to the necessity of begging anything basely, and if he do so let him go without it"—he is unworthy to receive it. "Give him nothing that he cries for till the dogged fit is over. If convenient, let him have it when he has regained his equanimity."

The child will thus learn that nothing is to be gained by peevishness, and as a necessary consequence will day by day become less waspish, less quarrelsome, and more obedient. In all his exercises let him be led to understand that it is not generous or just to injure his competitors, or even to wish them harm, but that it is praiseworthy to overcome or excel them without wishing to depress them. Finally, let him be taught to observe the Saviour's Golden Rule, so that he may always do unto others as he would have others do unto him.

G. V. LE VAUX.

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ONE singular feature of the Thousand Islands is the luxuriant growth of trees upon what seems to be almost bare rocks. Evergreens of a foot in diameter standing upon what seems an absolutely soilless rock are often seen. The roots of these trees follow down, through and out along the crevices, and thus gain nourishment as well as support for the tree.

*WHY NOT?*

**P**UBLIC sentiment is moving rapidly in the direction of compulsory education. During the last year this question has been discussed in the legislatures of Pennsylvania, Ohio, Connecticut, New Hampshire, Michigan, and other States. It is the most important school question of modern times. It is the leading question which divides the friends of education in France and England. In this great conflict, the older American States should take the lead. Our plans should embrace more than our boundaries. The interests of all the American States are virtually one. Like that of Switzerland, our motto should be, "One for all, all for one." The unification of Germany and of Italy—the most important of the recent political events in Europe—are largely the results of public instruction. Our people also, diverse in race and character, need now to be fused into one. More than anything else will universal education thus fraternize all. The extension of the franchise in our country demands a corresponding expansion of the school. To give the ballot to the ignorant would be suicidal to the nation. In the interest of public morality and order, the security of life and property, as well as for the safety and perpetuity of our free institutions, every agency should be employed to secure universal education.

Obligatory attendance is a corollary from the compulsory school tax. The power that claims public money for the purpose of educating and elevating all classes may justly provide that such public expenditure shall not fail of its appropriate end through the vice, intemperance, or perverseness of parents. The State has the same right to compel the ignorant to learn, that it has to compel the penurious to pay for that learning. If education is of universal interest, it must be universal in its diffusion. Many taxpayers have said to me, "If you compel us who have no children to support schools for the good of the State, you must effectively provide that the children of the State fail not to share the advantages thus provided. While we, will-

ing or unwilling, must support the schools, the children, by constraint if not from choice, should attend school."

And why not? The following are all the objections I have heard:

"Such a law would create a new crime." I reply, it ought to. To bring up children in ignorance is a crime, and should be treated as such. As the most prolific source of criminality, it should be under the ban of legal condemnation, and the restraint of legal punishments. All modern civilization and legislation have made new crimes. Barbarism recognizes but few. To employ children in factories who are under ten years of age, or who have not attended school, or to employ minors under eighteen years of age more than twelve hours a day, is each a "new crime" in the New England States.

"It interferes with the liberty of parents." I reply again, it ought to, when they are incapacitated by vice or other causes for the performance of essential duties as parents. Many other laws limit personal liberty. The requisition to serve on juries, or to aid the Sheriff in arresting criminals, or the exactions of military service in the hour of the country's need,—these and many other laws do this. If the law may prohibit the owner from practicing cruelty upon his horse or ox, it may restrain the parent from dwarfing the mind and debasing the character of his child. If the State may imprison and punish juvenile criminals, it may remove the causes of their crime and its consequences of loss, injury and shame. The child has rights which not even a parent may violate. He may not rob his child of the sacred right of a good education. The law would justly punish a parent for starving his child, and more mischief is done by starving the mind than by famishing the body. The right of a parent to his children is founded on his ability and disposition to supply their wants of body and mind. When a parent is disqualified by intemperance, cruelty, or insanity, society justly assumes the control of the children. In ancient Greece, the law gave almost unlimited authority to the father over his offspring. The same is true in some semi-barbarous nations now. In all Christian lands, the rights of the parent are held to imply certain correlative duties, and



the duty to educate is as positive as to feed and clothe. Neglected children, when not orphans in fact, are virtually such, their parents ignoring their duties, and thus forfeiting their rights as parents. The State should protect the helpless, and especially these, its defenceless wards, who otherwise will be vicious as well as weak.

"It arrogates new power for the government." So do all quarantine and hygienic regulations and laws for the abatement of nuisances. Now, ignorance is as noxious as the most offensive nuisance, and more destructive than bodily contagions. Self-protection is a fundamental law of society.

"It is un-American and ill-adapted to our free institutions." To put the question in the most offensive form, it may be asked, "Would you have a policeman drag your children to school?" I answer, "Yes, if it will prevent his dragging them to jail a few years hence." But this law in our land would involve no "dragging" and no police espionage, or inquisitorial searches. With the annual enumeration and the school registers in hand, and the aid of the teachers and others most conversant with each district, school-officers could easily learn who are the absentees.

There is no country in the world more jealous of liberty and more averse to any form of usurpation than our sister republic of Switzerland. It rejoices in being the land of freedom. It glories in free schools, free speech, free press, free trade, free roads, free bridges; for its roads, though the best in Europe, are without toll, and even the most costly suspension bridges are free. It has freedom in religion and freedom in traveling, no passports being required and no examination of luggage; no standing army, and no *gendarmes* brandishing the threatening hand of power, as everywhere else in Europe. And yet this free people in all their twenty-two cantons, except four of the smallest, choose for themselves the system of compulsory attendance.

In our own country there is every assurance of kindness and conciliation in the execution of the law. The plan is truly democratic, for its entire management is for the people, and by the people, through school-officers chosen by them and responsible to them. Connecticut, last year, passed a law enforcing attendance at school of all children dis-

charged from factory or other work for that purpose, with a penalty of five dollars a week for every week of non-attendance, not exceeding thirteen weeks in each year. The people plainly approve that law, stringent as are its provisions. It has already accomplished great good, and brought into the schools many children who otherwise would be absentees. There have been no penalties, no prosecutions, no opposition even. The law itself has been a moral force. It is itself an effective advocate of education to the very class who need it most. Were the same law made universal in its application, I anticipate no infliction of penalties, no legal processes whatever.

It is largely through immigration that the number of ignorant, vagrant, and criminal youth has recently multiplied to an extent truly alarming in some of our cities. Their depravity is sometimes defiant, and their resistance to moral suasion is obstinate. When personal effort, and persuasion, and organized benevolence have utterly failed, let the law take them in hand, first to the public school, and if there incorrigible, then to the reform school. Those who need education most and prize it least, are fit subjects for coercion, when all persuasives are in vain. The great influx of this foreign element has so far changed the condition of society as to require new legislation to meet the new exigency. The logic of events demands the recognition of compulsion, for we have imported parents so imbruted as to compel their young children to work for their grog, and even to beg and steal in the streets when they should be in school.

"Compulsory education is monarchical in its origin and history." Common as is this impression, it is erroneous. Massachusetts and Connecticut may justly claim to be the first States in the world to establish the principle of compulsory education. On this point their earliest laws were most rigid. They need but slight modification to adapt them to the changed circumstances of the present. Before the peace of Westphalia, before Prussia existed as a kingdom, and while Frederick William was only "elector of Brandenburg," Massachusetts and Connecticut adopted coercive education. The Connecticut code of 1650 comprised the most stringent provisions for compulsory education.

The select-men were required to see that so much "*barbarism*" was not permitted in any family "as that their children should not be able perfectly to read the English tongue . . . upon penalty of *twenty shillings* for each neglect therein." "If after the said fines paid or levied, the said officers shall still find a continuance of the former negligence, every such parent may be summoned to the next court of magistrates, who are to proceed as they find cause, either to a greater fine, or may take such children from such parents, and place them for years, boys till they come to the age of one-and-twenty, and girls till they come to the age of eighteen years, with such others who shall better educate and govern them, both for the public conveniency and for the particular good of the said children."

In our early history, public opinion so heartily indorsed the principle of compulsory attendance, or rather, so thoroughly accepted the necessity of universal education and so generally desired, and secured, it for children and wards, that attendance lost its involuntary character. No doubt the law itself originally contributed to diffuse and deepen this sentiment. If at first it was the cause, it became at length only the expression of public opinion. The requirement of this law that "*the barbarism*" of ignorance should not be tolerated in any family, helped to make it disgraceful to keep even an apprentice from school. To bring up a child or ward in ignorance was shameful and *barbarous* in the eyes of our fathers. This is still the sentiment of the genuine "Yankee." High appreciation of education is one of the most precious traditions of New England. To it we owe our growth, prosperity and liberty. But now we are a polyglot people. Immigrants from every nation of Europe abound, and some have come from Asia and the islands of the sea. The Germans, and the Jews, the Hollanders, Scotch, Sweeds and Swiss, almost without exception, and most of the Irish, favor universal education. But there have come among us many, ignorant themselves, and caring not if their children grow up like them. They are so ignorant as to be insensible to the evils of illiteracy. Yet, on the other hand, there is a growing number of immigrants, who, realizing how they have suffered all their lives from ignorance, desire a good education for their children.

The most plausible objection to such a law is that it would sometimes bring hardship upon poor parents. But our existing law provides for extreme cases, and authorizes the school-officers to make such exceptions as necessity may require. No public officers will show more sympathy for the poor than they. In their hands the administration of the law will be kind and paternal. The right to enforce will be used mainly as an argument to persuade—an authoritative appeal to good sense and parental pride. If any parents are too poor to send their children to school, individual charities or town benefactions cannot be better expended than for their relief. It is a short-sighted policy to permit indigence to perpetuate ignorance. The poor should not be left to transmit their poverty, by robbing their children of the sacred rights of education. If the schooling of all should involve some hardships, evils more and greater far would follow from ignorance. Better stint the stomach for three months a year, than famish the mind for life. There need be, and in this land of plenty, there would be no starvation to the body, while that education is insured which will lessen the amount of hardship and poverty a thousand-fold.

It has been objected that the school system has taken so deep a root in the sympathies and social habits of the German people that attendance would be just as large without the law as it is now. It may be so. But so far from being an objection, this fact is strong proof of the efficiency of that law which has itself helped to create so healthful a public sentiment. Were the law to be abrogated to-morrow the individual and general interest in public education would remain. The same might have been said of Connecticut for more than one hundred and seventy years after the adoption of compulsory education. During all that period, a native of this State, of mature age, unable to read the English language, would have been looked upon as a prodigy. Still, in Connecticut, as well as in Germany, it was the law itself which greatly aided in awakening public interest, and in fixing the habits, associations and traditions of the people.

It has been said that, "In some countries, without any

coercive law, the attendance is as good as in Prussia or Saxony with such a law." This is simply a mistake. Holland has been cited as an illustration of this statement. But while the Dutch show commendable zeal for public schools, the attendance is not relatively so large as in Prussia, and illiteracy is by no means so rare as in Germany. But Holland *has*, indirectly, a system of compulsory attendance. It denies certain immunities and privileges and honors to the uneducated. The parents of children who are not instructed up to the required standard cannot receive relief from certain charitable institutions. The ban of legal condemnation falls upon them as truly, though not so effectively, as in Prussia.

In Rotterdam, Hague, Amsterdam, and elsewhere in Holland, I was assured that the working classes regard the school law as practically compulsory. No one is permitted to teach even a private school, who has not been duly "examined and approved," and the public supervision includes private as well as public schools.

The tendency throughout all Europe is more than ever toward the recognition of the right and duty of the State to educate its entire population. Public sentiment, educated by recent events, now connects ignorance with crime, and poverty with individual and national weakness, as cause and effect. Sadowa taught Austria, and indeed all Europe, a salutary lesson. "Defeated in war, let it be our policy to excel in the arts of peace," became the national idea under the inspiration of Count Beust. There was no wasting of zeal and strength in the mad cry of revenge, as now in prostrate France. Austria was not unwilling to learn from an enemy, and adopted the educational system of her conqueror. Her school system was re-organized and vitalized, and the principle of compulsory attendance made prominent. Education is obligatory in Denmark, Norway and Sweden, and also in Switzerland, except in four small cantons of Geneva, Schywz, Uri and Unterwalden. The total population of these four cantons is less than one-seventeenth that of the whole nation. The new school law of Italy provides for both free schools and obligatory attendance, and includes the following important "Civil Service Reform :—" "No one

can be appointed to any State, Provincial, or Communal office whatever, who cannot read and write."

More than thirty years ago, Guizot, in his Educational Report to the French Government, ably opposed obligatory education, but the recent experience of France has changed his views, and now he is its earnest advocate. That one of his advanced age, long ranked among the foremost men of France both as a scholar and statesman, cautious, yet positive in his convictions, a historian in his tastes and studies, and therefore conservative, should now stoutly advocate that compulsory system which he so successfully opposed when himself the Minister of Public Instruction, in 1833, is significant. The logic of events during the last forty years proves that the very system which he largely originated is unsuited to the wants of the nation and the age. M. Jules Simon, the Minister of Public Instruction, explained to me his plan for the reorganization of Primary Instruction, by making it both gratuitous and compulsory. The penalties were to be a maximum fine of one hundred francs, and *loss of suffrage for three years*. After the year 1880, no citizen was to become a voter who could not read and write. But his bill is likely to fail at Versailles. While Thiers proposed an increase of eighty millions in the budget for the army, he said nothing for education. Even under Napoleon, fifteen times more was spent for the army than for education, including Primary, Secondary and Superior. The provisions for Superior education were liberal, and absorbed nearly one-half of the whole appropriation, leaving the Primary schools most meager, both in quantity and quality. The Ultramontane party, now dominant, stoutly oppose both gratuitous and obligatory instruction, and little is likely to be done for the better education of the masses. The objection that obligatory instruction would challenge resistance as an act of usurpation, seems ludicrous in a land where military conscription and the most rigorous police surveillance are universal and unresisted. Gambetta as well as Guizot, and the liberal republicans, strongly advocate obligatory instruction. Even the Commune favored universal and compulsory education, as also do the majority of the Parisians still. The opposition comes from the clerical and conservative parties.

The new school law of England *permits* all local Boards to enforce attendance. Public sentiment throughout England is now changing rapidly in favor of making compulsory attendance national and universal, instead of permissive. As one of many illustrations of this change, Rev. Canon Kingsley, formerly favoring non-compulsion, now advocates the compulsory principle.

The motto of the National Educational League, of which George Dixon, M. P., is President, is, "Education must be UNIVERSAL, UNSECTARIAN, COMPULSORY." At the late General Conference of Nonconformists, held in Manchester, January, 1872, and attended by 1,885 delegates, there seemed to be great unanimity in favor of enforced attendance. This assembly was as remarkable in its character as its numbers. The argument of Mr. Jacob Bright, M. P., on this subject was received with great applause. He said that the best part of the Education Act, that which is worth all the rest put together, is the permission to compel attendance, which should be the absolute law throughout the entire kingdom.

The laboring classes are not opposed to such a law. They would welcome it. In England the working classes are asking for a *national compulsory* system of education. By invitation of A. J. Mundella, M. P., I attended the National Trades-Union Congress, held at Nottingham for the week beginning January 8th, 1872. That body seemed unanimous in favor of compulsory attendance. One of the leading members, an able and effective speaker, said that in large and crowded assemblies of workmen he had often distinctly asked, "Do you agree with me that we want a national *compulsory* system of education?" and not a dissenting voice had he ever heard from the workmen.—*B. G. Northrop, in Christian Union.*

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A CURIOUS discovery has been made at Pompeii, namely, a glass bottle still full of oil. The liquid is to be analyzed to ascertain its greater or less degree of preservation.

## SCHOOL BOOKS.

THE recent Convention of the N. Y. State Teachers' Association, according to the *N.Y. Evening Post*, "was besieged, as usual, by the agents of school-book publishers with specimens of their wares. There is good, undoubtedly, in the multiplicity of books, and that school-books especially are indispensable there can be no question. But it may be very properly questioned whether new editions of school-books are not often a nuisance. In this matter of education, we are afraid, the Mammon of Unrighteousness sometimes has a finger, and that new books are often thrust into the hands of children, not because they are better than the old ones, but simply in the way of trade. A new geography, a new arithmetic, a new spelling-book, or a new reader is brought out, not so much that it is needed, or is more excellent than its predecessor, but that some publisher thinks that he can make, in the trade sense, a good thing of it.

He cannot, however, make a good thing of it without help. The help he wants is to be found in school committees and school principals. We do not aver it to be a fact, but we can conceive of its being possible that an expectant percentage may sometimes reveal faults in an old book and merit in a new one which would otherwise remain imperceptible. The essential difference may be quite hidden to ordinary eyes, and parents may be quite content that their children should learn all they can find in the old book rather than be put, once or twice a year, to the expense of a change. We presume that some people, and especially people of limited means, have grumbled that they are often compelled to buy new books no whit better than old ones, which their children are ordered to discard on the plea of improvement, and that they sometimes detect, or think they detect, a reason for the change in the difference between the trade price at which a teacher buys and the retail price at which he sells.

There are a great many people who look upon this constant change of school-books as an abuse which it is about time should be corrected. A child uses now a great many



more books during his school years than was necessary twenty-five years ago ; and it is rare now that the younger children of a family can use as they once could, the books which their older brothers or sisters have done with. If there was any absolute gain to knowledge, or any added facilities in its acquisition, nobody probably would complain. As the only gain, however, seems to be to those who make and sell school-books, the question becomes serious. If teachers are not paid enough, and they often are not, let salaries be increased and less latitude allowed in the book business. It is even asserted that the "ring" system is not unknown in this matter of text-books, and it can do no harm to look into it. We commend the subject to the next convention of teachers, where there are always men and women able and candid enough to give it due consideration."

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#### *POWER OF COMPREHENSION.*

**I**T was said of Thoreau, we believe, that he could take up any given number of lead pencils without counting. A celebrated trapper once assured us that he could tell how many balls he had in his bullet-pouch by placing his hand on it, and without stopping to count them, and added : " I can tell the number of bullets instantly without counting, as you pronounce a word without spelling it." Southey was accustomed to take in the substance of a book in turning the leaves over continuously, glancing down the pages. Houdan the magician trained himself to quickness of perception when a boy by running past a show-window at full speed, and then trying to tell what was in it. We once met a man on a canal boat, who was amusing himself by going from passenger to passenger, and telling almost every one where he had seen them before, on such a train, in such a hotel, in such a street, giving date and place to people with whom he had never exchanged a word. This training of the faculties in particular directions is carried to a marvellous extreme by woodsmen, trappers, and men who guess

the weights of animals. Perhaps the most remarkable instances are the markers who leap from log to log at the mouth of a boom, standing on the floating log and translating instantly an old mark into a new one, remembering what equivalent to give for each of a hundred marks, and chopping it upon the log in the time that it floats its length. It is said that Thoreau knew the relative order of the flowering of all the plants in the Concord woods, and knew the note of every bird, and a thousand other out-of-the-way things besides.—*Hearth and Home.*

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### THE EMOTIONS.

IT is remarkable what analogy exists between the bodily phenomena and the emotions; heroism and daring pour life and vigor through the blood-vessels and muscles; the eyes sparkle, the breast expands, every limb prepares, as it were, for battle, man looks like a fiery steed. Terror and fear extinguish the fire of the eyes, the limbs feel heavy and powerless, the marrow of the bones seems congealed, the heart feels oppressed, a general sense of fainting paralyzes the organs. A great, bold, and exalted thought compels us to stand on tiptoe, to raise our heads, to dilate our nostrils, and to open widely our mouths. The feeling of infinitude, the unobstructed view of a far-reaching horizon, the sea, and similar scenes, compel us to extend our arms as if we would give ourselves up to the infinite. At the sight of mountains we want to reach upward to the skies; we feel like rushing onward with hurricanes and waves; a precipice hurls us into the yawning abyss; hatred manifests itself in the bodily life by a repelling power, whereas friendship desires to realize a oneness with the friend's body by every shake of the hand, every embrace, even as the souls form one; pride raises the body; pusillanimity lowers the head, the limbs become relaxed; a servile fear is shown by the crawling gait; the idea of pain distorts our features, whereas the thought of delight embellishes our whole form; anger has torn the most powerful bonds, and necessity has almost conquered impossibilities.

## CORRESPONDENCE.

September 20th, 1872.

**M**R. EDITOR—You will, no doubt, recollect that we had a discussion upon the formation of the Possessive Singular, in which we disagreed. A circumstance has since occurred which led me to examine the matter carefully:—

*Rule 1.*—The possessive case is formed by adding an apostrophe S to the nominative.

*Exception.*—S after the apostrophe is omitted when the word has the sound of S in its last two syllables, and the following noun begins with an S sound.—*Fowler.*

*Remark.*—The chief exceptions or irregularities, in the formation of the possessive singular are, I think, to be accounted mere poetic licenses, and seldom, if ever, to be used in prose.—*Brown.*

*Rule 2.*—When the possessive noun is singular and terminates with an S, another S is requisite after it, and the apostrophe must be placed between the two, as "Dickens's Works," "Harris's Wit."—*Day's Punctuation.*

The fact that we found cause to disagree is evident that there has been a difference of usage. But I am satisfied that the best writers in the language adhere to Day's rule.

I find, in searching through my library, the following cases, pro and con.

## PRO.

"Willis's Poems,"  
 "Willis's School,"  
 "Loomis's Astronomy,"  
 "James Otis's Letters,"  
 "General Gates's Command,"  
 "Mr. Williams's Oration,"  
 "Mr. Williams's School,"  
 "Governor Meigs's Promptness,"  
 "Harris's Hermes,"  
 "Philips's Poems,"  
 "James's Edict,"  
 "The Lass's Beauty,"  
 "Harris's Entomology," *et al.*

## CON.

"Willis' Constitution,"  
 "Bullions' Latin Lexicon,"  
 "Loomis' Geometry,"  
 "Andrews' Latin Lexicon."

Yours truly,

O. R.

## CURRENT PUBLICATIONS.

THE arrangement of Swinton's little book on the Analysis of Words<sup>(1)</sup> is convenient, the examples mostly well taken, and the exercises adapted to develop the powers of analysis and discrimination. There are indications throughout the work, however, that it was rapidly, if not hastily, prepared for the press. For instance, *navigate* is said, page 7, to be "with reference to Latin, a *derivative* word,"—a statement that seems to confound derivation with composition. One could possibly regard *gate* or *igate* as a suffix, to be sure; but he would have to own *nav* in that case as a prefix, and where would be the "primitive?" On page 14 the suffixes *ar* and *ard*—"the suffix *ar* or *ard*," S. writes it—are given as the same ending; for a truer view see *ard* in Worcester, or, better, in Webster; or in Gibbs' *Teutonic Etymology*, p. 76. On p. 17 we are informed that the suffixes *eer* and *ee* are different forms of *er*. Earle, *Philology of the English Tongue*, p. 289, says that *ee* is from the French passive participle. Mr. S. says that *er* and *ee* both mean *one who*, without hinting that the one is active and the other passive. Perhaps it would be allowable to define *ee* by *one whom*. The ending *er* in *greater* is said, p. 18, to mean literally *ere* or *before*. The termination *est* of the superlative should then mean *erst* or *first*, it would seem. And what then do the formatives *ior*, *ius* signify in Latin, or what becomes of the original *s* of which Dr. Morris speaks?—*English Accidence*, p. 106; also Haldeman, *Affixes*, p. 146. Page 21 furnishes this: "'Godly' was formerly written *godlic*, that is *goodlike*." If by this Mr. S. means to have us understand that *godly* is etymologically identical with *goodly*, or that GOD means simply *The Good*, then we demur and refer him to Dr. Mahn in *Webster's Dictionary* or to Wedgwood, under the word *God*. The scholar is asked, p. 33, to say "*why* the final *e* of *judge* is dropped before the suffix *ment*?" The "ans." does not

(1) WORD-ANALYSIS, a Graded Class-book of English Derivative Words, with Practical Exercises in Spelling, Analyzing, Defining, Synonyms, and the Use of Words. By William Swinton, A.M., Professor in the University of California, author of "Rambles among Words," etc. New York: Ives, Blakeman, Taylor & Co., 1872.

tell, though it refers us to an "exception" to a "rule." We presume almost any bright boy could say "why" it should *not* be dropped. This "why" occurs frequently throughout the book, in cases where only a fact or rule can be given, and not a reason. The derivation of *King*, p. 35, as he who *kens* and therefore *can*, is a very plausible, as well as familiar one. Carlyle makes much of it; Richardson adopts it; but Worcester, Webster, Morris and Wedgwood do not. The inference from *ken* to *can*, and from both to the proper *kingly* attributes, is a neat as well as an easy one; but has, perhaps, no historical ground to go upon. It is like some sermons one hears, entirely unobjectionable in point of doctrine and morals, but innocent of all connection with the text. *Rack* is made to depend on *reck* in this way, p. 46: "To *reck* is to care, and what gives care strains," *i. e.*, *racks*. This is singular etymologizing. In the first place, as to the phonetics of the derivation, the open *a* of *rack* is made to come by corruption of the close *e* of *reck*! Next, as to the sequence of ideas, the physical meaning, *strain* or *stretch*, is made secondary to the mental notion of *caring*; as palpable an inversion as one of Alexander Smith's similes. And thirdly, inasmuch as these two meanings are carefully discriminated by different spellings as far back as we can trace the English vocables (A.-S. *ræcan*, *ræhte* and *rēcan*, *rōhte*), it is hardly worth while to set children at work upon the metaphysics of Anglo-Saxon word-building. On p. 48 we find the word *husband* explained once more, as "the *band* or *bond*, that is *head* of the house." Now it is not clear to us that *band*=*head*. Worcester and Richardson, who name this explanation of Skinner's, suggest the true source of=*band*, *i. e.*, *bonda* from *buan*=to dwell. Even Smith, *Hand-book of Etymology*, gives the right etymon. *Wife* may indeed have signified *weaver* once, but Dr. Mahn does not hint at this derivation, Wedgwood declines to admit it, and Morris distinctly rejects it. *Brunt*, p. 49, may possibly be from *burnt* by transposition of letters. So thinks Trench, following Horne Tooke; but Wedgwood is of another mind, and says it means the *shock* and not the *heat* of battle, and cites old English in which it plainly signifies a *blow*. On p. 50 *if* and *and* are affirmed, after Tooke and others, to be the remains

of old imperatives, but Wedgwood and Mahn do not countenance this view, plausible as it appears at first sight. On p. 54 *mis* is inserted in a list of Latin prefixes, *ob* is said to mean *out* in *obviate*, and *subterfuge* is defined a "*flying under*." Two pages after, *let* is given as a Latin suffix. Turn another leaf, and *exigency* is defined as "the state of being necessary to be *done*;" it is named here only because it professes to be an etymological or "literal" definition. On the next page we have *amicus* and *inimicus* which may be charged to the "little Latin" of the proof-reader. P. 83, a *peddler* is said to be "a trader who travels *on foot*," and the Latin *pes* is given as its original. The definition may be right, we admit; but the word is not from the Latin, whatever *pad* or *ped* may mean. P. 95, *astron* is defined "the stars;" p. 105, *oplon* ignores the *spiritus asper*. *Sincere* is said, p. 107, to have been applied originally to honey, and to signify "without wax." Freund says its etymology is unknown, and Wedgwood seems equally at a loss. In this country a sweet hodge-podge of various ingredients used to be hawked from house to house as "Southern honey," and the bees' wings and fragments of comb contained in it were the unquestioned proofs of its genuineness. The familiar phrase, "Sweeter than honey and the honey-comb," that is, than purest honey, is of itself almost proof that *sincere* cannot be *sine cera*. On page 108 *plané* is defined "a wanderer;" *zodiakos*, "animal;" *epi*, "away," and *genao* is presented as a Greek word. *Impromptu* is given as Latin on p. 120, and *caput mortuum* is defined as "*the lifeless head*,"—not a very helpful explanation; and p. 121, *non est inventus* is said to signify "*It is not found*," a rendering which, considering the literalness of the translation last cited, can hardly be allowed to stand. There is manifestly need here of more care or of more scholarship. We do not quite agree with the assertion, p. 52, that "to pursue this study does not require any knowledge of Latin" or Greek. The teacher of it will certainly have need at times, if not constantly, of the very amplest equipment.

The definitions of the work are often inexact, introducing ideas not expressed by the words defined, but only associated with them. As etymological explications they err by

surplusage. For instance, p. 52, *educate* is said to be from *duco*, I draw, and *e*, out, and "therefore" to mean, "to draw out *the faculties of the mind*." On the next page, *ambition* is defined as "a going round *to seek votes*." *Creed*, p. 69, is said to be "a summary of *Christian belief*." *Auto*, p. 105, is Englished by "*one's self*."

Now it may be said that this is hypercriticism; that the things to which we take exception are minute. Very well; whoever does not care for accuracy in the little things of etymology, had best leave it for less delicate work. Nowhere is there more need of discriminating judgment, combined with exact learning, than in the little things, which are the great things, of linguistics. It is because of our sense of the merits of this little book that we have bestowed so much attention upon the mistakes which caught our eye upon a rapid reading. And we have cited authorities chiefly to show how abundant and how accessible are the means of correcting or avoiding such errors as we have noted. Our own mind is not made up as to the extent to which Etymology, or "Word-Analysis," should be taught to children; but we are clear in this, that they should learn nothing which they will be forced subsequently to unlearn. Our motto is, The truth, or nothing.

MANY text-books on the science of Physiology and Hygiene have been presented to the schools and colleges of this country during the past few years. These are chiefly abridgments of the larger works used in medical colleges; and as Physiology is taught in those schools with a direct reference to the cure of disease, these books retain more or less of this character. But the study of Physiology in other than medical schools should have direct reference to the *preservation of health* rather than to the *cure of disease*. It has been the leading purpose of Dr. Brown in his new work (\*) to make HYGIENE the prominent feature of this book, and all other studies introduced subordinate to it. We think the author's claims are well wrought out in a very handsome little book of 286 pages.

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(\*) ELEMENTS OF PHYSIOLOGY AND HYGIENE. By R. T. Brown, M.D., Chemist in chief, Department of Agriculture, Washington, D. C. Wilson, Hinkle & Co., Publishers.

THE merits of Dr. Ernst Curtius' "History of Greece"<sup>(3)</sup> it is not necessary for us to set forth anew. The second volume, as well as the present, has been subjected to careful revision, after the last German edition, and provided with an index. In these points it has the advantage of the English issue. The volume begins with the opening of the Peloponnesian War, and brings the story down to the end of the Deceleian War, covering a period of about thirty years, closing in the summer of B. C. 404. Comparing this with the previous volumes, we note that the references to original sources are more numerous, though by no means equaling those of Grote. The latter is exhaustive not only, but to most men exhausting also, requiring eight volumes to reach the point at which Curtius arrives in three. To those who have come to feel that art is very long as compared with the shortness of life, the brevity of Dr. Curtius' work will commend it, over and above its excellencies of construction and style. No student of history can afford to lack this work and Mommsen's Rome, lately issued by the same publishers.

MESSRS. ELDREDGE & BRO. have just published "A French Verb Book, embracing a Comprehensive Analysis of the Conjugations, with a new method for the formation of the tenses." By Ernest Lagarde. 130 pages.

MESSRS. MASON, BAKER & PRATT have published "The Bryant and Stratton Business Arithmetic. A new work, with practical problems and valuable tables of reference." 564 pages.

MESSRS. J. B. LIPPINCOTT & CO. have published "Geometrical Analysis, or the construction and solution of various geometrical problems from Analysis." By Benjamin Hallowell. 279 pages.

CHASE'S WRITING SPELLER AND DEFINER, published by Adams, Blackmer & Lyon Publishing Co., is having a great success in the West.

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(3) THE HISTORY OF GREECE. By Professor Dr. Ernst Curtius. Translated by A. W. Ward, M.A. Revised with an index by A. W. Packard, Ph. D. Prof. in the College of New Jersey. Vol. III. New York: Scribner, Armstrong & Co.



MR. FROUDE'S new work is a "History of Ireland." The initial volume will be published in this country.

JOHN S. C. ABBOTT has prepared a new series of books for the young—"Lives of Early American Pioneers and Patriots."

JOHN FISKE, lecturer on the Positive Philosophy at Harvard College, is making extracts from "Taine's History of English Literature." The book will appear soon.

PROF. JOHN S. HART is to prepare, during his absence in Germany, a popular book on the German Universities.

GUIZOT'S Correspondence will be published shortly, in six or more volumes.

MR. MOTLEY, it is said, will soon have ready for publication the first instalment of his "History of the Thirty Years' War."

AN immense undertaking is being published in Germany—"A literary biographical dictionary to the history of German national literature."

CARL GUTZKOW'S new novel, "Fritz Ellrodt," is highly praised in Germany.

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*MISCELLANEA.*

ONE of the pests which dog civilization—the more so the further it advances—is the fear of ridicule. Is there anybody living who has not often been laughed out of what he ought to have done, and laughed into what he ought not to have done? Who has not sinned? Who has not been a renegade from duty? Who has not stifled his best feelings? who has not mortified his noblest desires, solely to escape being laughed at? And not once, merely; but time after time, until that which has so often been checked becomes stunted and no longer dares hold up its head. And then, after having been laughed down ourselves, we join the pack who go about laughingdown others.

"ST. JEROME, in his retreat at Bethlehem, endeavored to cure his mind of its hankering after classical literature by submitting his body to repeated flagellations, the very method which in our public schools is applied, quite as ineffectually, for the opposite purpose.

JESSE OLNEY, the eminent geographer and author of Olney's Geography and Atlas, died at Stratford, Conn., on the 30th of July.

A HARVARD student defines flirtation to be attention without intention.

MUSIC OF ROLLING SAND.—At the late meeting of the British Association for the advancement of Science, Captain H. S. Palmer contributed an interesting paper on An Acoustic Phenomenon at Jebel Nagus, in the Peninsular of Mount Sinai. Jebel Nagus is a peculiar sand slope, from which loud and mysterious noises are frequently heard to proceed, exciting the superstitions of the Bedouin and wonder of travelers. The slope is about two hundred feet in height. The sand, which is of a pale yellowish-brown color, appears to be that of a neighboring desert. Its grains are large and consist entirely of quartz. The sand of the slope is so pure and fine, and in its usual condition so perfectly dry, and lies at so high an angle (nearly thirty degrees) with the horizon, as to be set in motion by the slightest cause. When any considerable quantity is thus in motion, rolling slowly down the slope, like some vicious fluid, then is heard, at first a deep, swelling, vibrating moan, rising gradually to a dull roar, loud enough when at its height to be almost startling, and then gradually dying away till the sand ceases to roll. Captain Palmer said that this sound is very difficult to describe exactly; it is not metallic, nor like the sound of a bell, nor yet like that of a nagus. Perhaps the very hoarsest note of an Æolian harp, a deep-toned finger-glass, most closely resembles it, save that there is less music in the sound of this rolling sand. It may also be likened to the noise produced by air rushing into the mouth of an empty metal flask, or bottle; sometimes it almost approaches the roar of thunder, and sometimes it resembles the deeper note of a violincello, or the hum of a humming-top.

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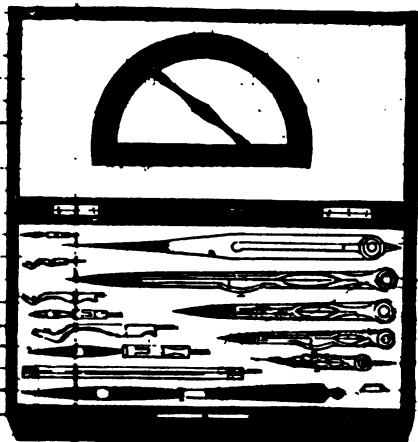
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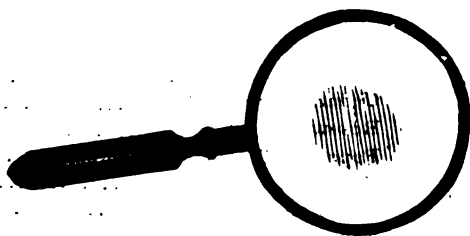
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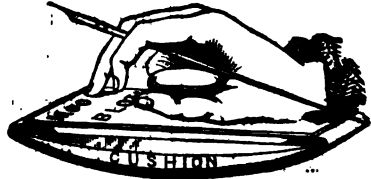
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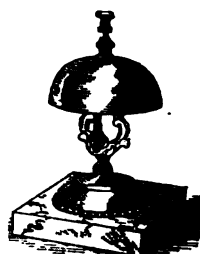
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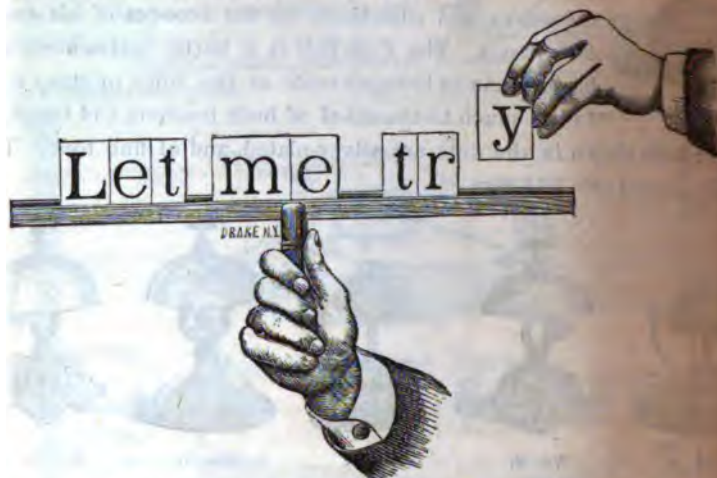
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*A Magazine of*

Popular Instruction and Literature.

November, 1872.

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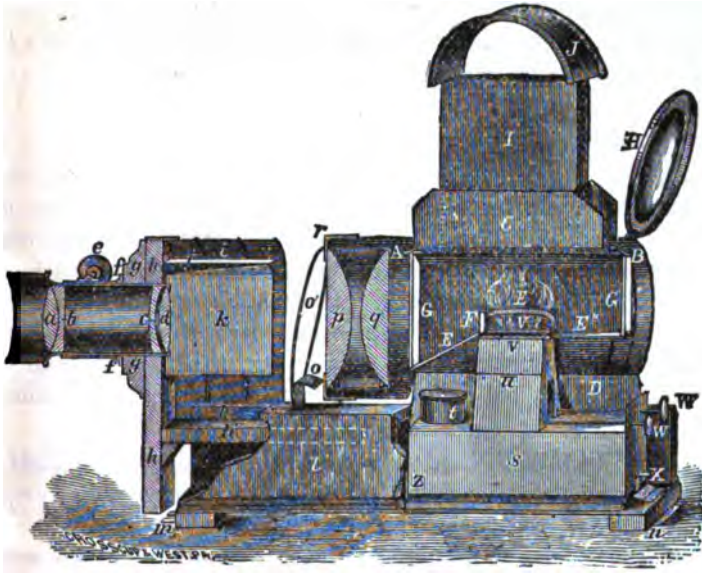
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Several parts are represented in section above: *a d*, crown glass, and *b c*, flint glass lenses of objective; *e*, milled-head connected with rack adjustment; *f f*, flange screwed to a ring *g g* projecting the draw front *h h h*; *i*, hood to hide reflected light; a back cap, answering the purpose of a drop in now takes place of *j k*; *l l*, part of the wooden frame, the rest being cut away to show internal arrangement; *m*, claw, and *n*, flange to hold the instrument to screw-heads on its box during exhibition; *g e*, and *o'* spring for picture slides; *p q*, condensing lenses in cells attached to *r* which shuts over the end of the cylindrical body; the concave reflector *H* closes the back end of the cylinder, having *E'* its concavity; *s*, lamp cup sliding in and out horizontally, and held in place against the stop *s* by the *g s*; *t*, nozzle for receiving kerosene oil; *u v v*, parts of wick tubes constructed to secure perfect *w w*, buttons for adjusting the lampwicks; *A B*, springs for holding flame chamber glasses *G G'* in *C*, portion of cylinder turned up to ventilate flame chamber, and *D* portion turned down to attach to *E E'E''* deflecting cap, serving also as bottom to flame chamber, not removable; *F*, narrow glass to at the wide strip *G* from cracking by heat; *I*, chimney; *J*, chimney cap. The whole is elegant, symmetrical, and enduring, and about one-third the size of an ordinary magic lantern.

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The following extracts are descriptive of the Sciopticon:

*From the Journal of the Franklin Institute.*

"Our attention was drawn some time since to this very decided improvement in lanterns illuminated by ordinary flames, by which their efficiency is so greatly increased that many results can be reached which were heretofore only attainable by aid of the lime or magnesium lights.

"The most important feature in this apparatus is the lamp, or, as it might in this case be called from its appearance, the furnace. This source of action to the entire machine is placed in a cylindrical chamber, provided with a chimney, and has two flat wicks one and a half inches long, parallel to each other and to the axis of the chamber, and in fact the optical axis of the instrument. The flames, or rather sheets of flame, that arise from these wicks are drawn together by the arrangement of the draft, and so form a pointed ridge or edge of intense light in the axis of the condensers. We have, on various occasions, alluded to the fact long ago pointed out by Rumford, that flame was practically transparent. Here this property is utilized, and by reason of it we can get through the condenser all the accumulated brightness of the long line of light, one and a half inches deep.

"We have witnessed a number of experiments with this lantern, and can fully indorse it as a great advance upon anything before used in the shape of a lamp-illuminated magic lantern. For parlor or school exhibition, it may well take the place of the far more troublesome oxy-calcium lantern, which it rivals in efficiency."

*From the Scientific American.*

"Modern improvements in lenses, lights, and pictures have raised the character of the instrument from that of a mere toy to an apparatus of the highest utility. By its employment the most wonderful forms of creation, invisible perhaps to the eye, are not only revealed, but reproduced in gigantic proportions, with all the marvellous truth of nature itself. The success of some of the most celebrated demonstrations of Faraday, Tyndall, Doremus, Morton, and others, was due to the skilful use of the magic lantern. As an educator, the employment of this instrument is rapidly extending. No school apparatus is complete without it; and now that transparencies are so readily multiplied by photography upon glass, upon mica, or gelatin, by the printing press or the pen, it is destined to find a place in every household; for in it are combined the attractive qualities of beauty, amusement, and instruction.

"The electric light affords probably the strongest and best illumination for the magic lantern; then comes the magnesium light; but their use is a little troublesome and rather expensive; next to these in illuminating power is the oxy-hydrogen or Drummond light. The preparation of the gases and the use of the calcium points involve considerable skill. Need has long been felt for some form of the magic lantern having a strong light, but more easily produced than any of those just mentioned; and this has at last been accomplished, after several years' study and experiment, by Prof. L. J. Marcy.

"The Sciopticon is the name of his new instrument, and from actual trial we find that it possesses many superior qualities. Its lenses are excellent, and in illuminating power its light ranks next to the oxy-hydrogen. The Sciopticon Light is produced from ordinary coal oil, by an ingenious arrangement of double flames, intensifying the heat and resulting in a pencil of strong white light. Professor Marcy's instrument is the perfection of convenience,

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# AMERICAN EDUCATIONAL MONTHLY.

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NOVEMBER, 1872.

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## *THE INJURIOUS INFLUENCES OF THE SCHOOLS.\**

### PREFACE.

THE influences at work in public schools upon the health of the scholars, have been of late years in Germany the subject of much inquiry\* and discussion. The following report was made, in 1869, by the renowned pathologist, Dr. Rudolf Virchow, of Berlin, at the instance of the Prussian Minister of Public Education, who requested that gentleman to examine into and report the injurious influences at work upon the health of the young in the public schools of Germany. Although, according to the nature of the inquiry, no new facts could be brought to light, Dr. Virchow made conscientious and judicious use of the experiences of his predecessors in the same field, and his conclusions are in every case, where it was possible, based upon statistical data. The present report is, therefore, of great value for precise and convincing treatment of the subject. The concluding remarks therein, urging the formation of a Government Sanitary Commission for the public schools, are worthy of earnest attention by our own school authorities. The *Talmud* says: The breath—consequently the health—

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\* A Report, by Dr. Virchow. Translated by J. P. Jackson. Preface by translator.

of the school children upholds the world! And not only must pure air be introduced into our school rooms, but many evils already there, removed.

Dr. Virchow hardly needs a word of introduction to the American public, and none at all to medical men. A few biographical details, will, nevertheless, be interesting. Rudolf Virchow was born on the 13th of October, 1821, at Ichivelbein, Pomerania; he received his education at the Coslin Gymnasium, studied medicine at the Medical and Surgical Friedrich-Wilhelm's Institute in Berlin, and graduated in medicine there in 1843. He rapidly gained position among his fellow physicians, and was made prosector at the Charité, where he had excellent opportunities for pathological studies, which he used with his friend Reinhardt. The results of their labors were published by both in the *Archiv für Pathologische Anatomie und Physiologie*, established by them, and carried on alone by Virchow after Reinhardt's death in 1852. Virchow has ever been one of the foremost in Germany in the conflict for medical reform. He was sent in 1848 by the Prussian government to Silesia, to report on the typhus fever prevailing there, and gave his observations in "The Typhus in Upper Silesia" (Berlin, 1848.) In 1847 he fitted himself for a professorship in the University of Berlin, but was removed by the ministry in 1849, because of his democratic principles. In August, of the same year, he accepted a call to the chair of Pathological Anatomy in the University of Wurzburg, and was soon one of the most prominent members of the so-called Wurzburg school. His lectures at that University were so widely popular, particularly on cellular pathology, that he was recalled to Berlin in 1856, where he reoccupied the chair of Pathological Anatomy, and rendered it the most famous of its kind in Europe. The fame now attached to the medical faculty of that institution is in a great part due to him. We omit details of Virchow's political life. He is now a member of the Prussian House of Deputies, and is numbered with the founders and leaders of the so-called "Party of Progress."

Professor Virchow is the founder of the so-called theory of cellular pathology, which gives prominence to the vital action of cells in the healthy and diseased functions of the

body, which theory he first developed in his "Lectures on Cellular Pathology," (Berlin, 1859.) This work was translated into nearly all the languages of Europe, and the third edition formed at the same time the first volume of his "Lectures on Pathology," (Berlin, 1862.) During our late war the government had especial editions of this work published, and distributed among the military physicians. The second, third, and fourth volumes of the latter work (1863-67,) include the lectures on "Diseased Tumors." Among his other works, are "The Famine in Spessart" (Wurzburg, 1852;) "Collected Treatises on Scientific Medicine," (Frankfort-on-the-Main, 1856;) with the coöperation of various German medical men, "Handbook of Special Pathology and Therapy," (Erlangen, 1854;) "Researches on the development of the skull," (Berlin, 1857;) "Four Addresses on Life and Disease," (Berlin, 1862;) "Trichiniasis," (Berlin, 1865;) "On the Hunger Typhus," (Berlin, 1868.) With Dr. Holtzendorff, Dr. Virchow is now publishing, in the German language, a very valuable collection of "Popular Scientific Lectures," in which he has printed many interesting essays and lectures. Virchow takes an important part in all efforts for the public good; he has for years lectured in the Berlin Mechanics' Union of Berlin, and is president of the Union for Family and Popular Education. The following essay on "Certain Influences of the Schools injurious to Health," first appeared in Virchow's *Archiv für Pathologische Anatomie und Physiologie und für Klinische Medicin*. Our object in translating it will have been accomplished if, as Dr. Virchow remarks, it contributes toward calling the attention of other and larger circles beside scientific men to the subject here touched upon, and incites to new observations and suggestions, having in view the better construction of the school-rooms, and the obviation of all influences injurious to the young, and consequently to the rising generation.

#### INTRODUCTION TO THE REPORT.

The attention of physicians and educators has been repeatedly called, since the commencement of the present century, to the injurious influences at work in the schools, upon the health of the young, first in one direction and then in

another, though, as a rule, they have never been subjected to a thorough and scientific examination. Even the essay of Lorinser (in the *Preuss. Med. Vereinszeitung*, 1836,) which caused so much excitement at the time of publication, treats of the constantly increasing shortsightedness, diseases of the abdomen, pulmonary consumption, and other diseases among the youth of the higher schools, as something already well-known; and his opponents, Ebermaier, for example, uttered just as indefinite assertions to the contrary, though without producing anything like a similar impression. Certain general experiences, certain notorious, and, therefore, accepted dogmas, passed into the books, or gradually won their way into the common language of the educated, yet when people were asked for reasons or external proofs, the answer was, in most cases, perfectly insufficient.

The attempts to win real facts as cases upon which to give judgment by means of well ordered examinations are very isolated; and it must be acknowledged as an exceedingly great progression, that, in single directions, the beginning has indeed been made, to win statistics of that which we may call the *school-evil*, and the *diseases of the school*. It is only possible by means of extended, scientifically sure, comparative statistics to say with certainty what evils or diseases are produced by the schools, and what is to be done for their prevention. When this statistical basis is wanting, we have indeed always certain scientific axioms of general worth, which can be applied to the schools as well as to other institutions of society; but it cannot be denied that in their application many very important considerations may be overlooked or falsely estimated. In the following report these two groups will be kept strictly apart, and those evils which are proved by fact will be carefully separated from those merely assumed.

#### DISEASES OF THE EYE, ESPECIALLY SHORTSIGHTEDNESS.

The first attempts to prove by the statistical method the earlier estimated influences of the schools upon the development of shortsightedness, were made in the commencement of the present century, by Ware, of England, though they were insufficient, and in no way methodical. Since then,

similar inquiries have been undertaken in various countries of the Continent, especially in Germany, in part officially, and in part by private persons; though hardly any are consistently and systematically organized. The researches of Dr. Hermann Cohn, of Breslau, were the first to take on a form corresponding to the present state of science, not only as regards the number of persons included in the examinations, but also the method and carefulness of the observations; and they can, therefore, be looked upon as extremely important, indeed, in a certain sense, as determinative.

Dr. Cohn bases his deductions upon the results of the examinations of the scholars of five village schools at Langenbielau, as well as of twenty elementary schools, two higher girls' schools, two intermediate schools, two technical schools (*Real Schulen*) and two gymnasias in Breslau. Of 10,060 scholars, Cohn made the preliminary examinations himself of 6,059; while the rest were subjected, by the teachers, to a test prescribed by him. He subsequently examined minutely the condition of the eyes of 410 Breslau University students. In all of these, the age, the number of years spent in the school, the arrangement of the school-rooms, were recorded; the relation of the diseases of the eyes to these various agencies taken into account; and the materials thus won furnished, in its details, a secure basis for a scientific test such as can scarcely be equalled in any other quarter.

Taken as a whole, the result was gained that among these 10,060 scholars, seventeen per cent. were not normal-sighted, though the latter percentage is very dissimilar in the various schools, as the following figures will show:—

|                                |      |           |
|--------------------------------|------|-----------|
| In the Village Schools.....    | 5.2  | per cent. |
| “ City Elementary Schools..... | 14.7 | “         |
| “ Intermediate Schools.....    | 19.2 | “         |
| “ Higher, Girls'.....          | 21.9 | “         |
| “ Technical (Real).....        | 24.1 | “         |
| “ Gymnasias.....               | 31.7 | “         |

Among the 410 Breslau students there were found sixty-eight per cent. not normal sighted (ametropic).

Leaving now out of the question hyperopy, astigmatism, and the real diseases of the eye, as of less importance here,

and treating only of shortsightedness proper (myopia), we come to the deplorable result, that, on the whole, there were nearly ten per cent. of shortsighted among the children, as follows :—

|                              |      |           |                                     |
|------------------------------|------|-----------|-------------------------------------|
| Village Schools.....         | 1.4  | per cent. | } City Schools<br>11.4<br>per cent. |
| City Elementary Schools..... | 6.7  | "         |                                     |
| Higher Girls' Schools.....   | 7.7  | "         |                                     |
| Intermediate Schools.....    | 10.3 | "         |                                     |
| Technical.....               | 19.7 | "         |                                     |
| Gymnasia.....                | 26.2 | "         |                                     |
| Students.....                | 60.0 | "         |                                     |

If a regular increase as we ascend into the higher schools is shown, this phenomenon becomes all the more apparent when the separate classes of each school are considered. It may here suffice to introduce the classes of the city elementary schools and the gymnasia :—

|                     | VI   | V    | IV   | III  | II   | I    |
|---------------------|------|------|------|------|------|------|
| Elementary Schools, |      |      | 2.9  | 4.1  | 9.8  | 9.8  |
| Gymnasia            | 12.5 | 18.5 | 23.7 | 31.0 | 41.3 | 55.8 |

The lamentable judgment here expressed by Dr. Cohn, can, unfortunately, not be confuted : all the less because he proves by comparative tabular demonstration, that, not only is there an increase in the number of the shortsighted, from class to class, but that also the intensity of shortsightedness increases in the same ratio. The girls' schools and intermediate schools alone make in this respect an exception. Myopia, in these schools, is, therefore, on the whole, progressive; it takes on, by and by, that dangerous course which eventually leads to shortsightedness proper.

Dr. Cohn is, on the other hand, very careful to guard against the opinion being ascribed to him, that the enormous spread of myopia among school children is to be exclusively attributed to the schools. It is evident that there are, besides the school, many other unfavorable agencies at work, even in the parental house. In order to gain reliable material for an opinion here, however, it would be necessary to make examinations among other categories of the population; for instance, among the apprentices and journeymen of parallel age. Such comparative surveys are, as yet, totally wanting. Nevertheless, it can be said with certainty,

that the class of apprentices and journeymen of the age of the scholars of the first class of the gymnasia does not contain an average of from fifty-five to fifty-six per cent. of shortsighted, and that the class corresponding to the age of the students does not contain sixty per cent.! And though it be admitted that bad lights, small print, improper posture when seated, etc., have a very injurious effect, even in labors at home, it must be conceded that many of these habits are transferred first of all from the school to the house, or at least that the schools do not sufficiently guard against the cropping out of bad habits in this respect, that they, indeed, tend to promote individual ones.

Besides the question of light and the lighting (illumination) of school-rooms, Dr. Cohn has subjected the immovable desks and benches, at present in use in the German schools, to a thorough investigation, and considers himself justified in designating them as positively injurious in their present arrangement, since they compel the scholar to observe his writing or book in close proximity, and with the head bowed down over the desk. This necessitates, on the one hand, a greater activity of the muscle of accommodation in the eye, and this again causes an increase of the hydrostatic pressure in the back part of the pupil and an elongation of the axis of the eye in a backward direction; on the other hand, causing a stoppage of the reflux of blood from the eye, in consequence of the inclined position of the head, and an overfilling of the pupil with blood, which also heightens the pressure in the background of the eye. Both circumstances together are the cause of shortsightedness.

This argument is, on the whole, undoubtedly correct, although it is possible that objections may be urged against single points. Donders (*On the Anomalies of Accommodation and Refraction of the Eye*, London, 1864, p. 343,) does not accept the elongation of the pupil as a result of the accommodational activity, although he explains the frequency of shortsightedness among the educated classes expressly by the straining of the eye with too close objects. Three causes are determinative with him: first, the pressure of the external muscles of the eye upon the pupil, with strong convergence of the axis of sight; second, the heightened pressure of the fluids, in consequence of the massing of blood in

the eye, by the inclined posture of the head : third, congestive positions in the background of the eye. The worse the light the stronger these causes appear, for the nearer must the object be brought to the eye, and from this results the stronger convergence, as well as the increase of the pressure of blood.

It is evident that this latter explanation applies just as well in the case before us as in the one previously mentioned. If it is to be accepted as proved, that shortsightedness (myopia) is in reality an elongation of the axis of the eye, and that the greater proximity of the object to be observed, together with the bowed-over position of the head, and especially with imperfect light, can produce, by and by, such an elongation, we must all the more ascribe a similar effect to the unsuitable forms of the desks and benches since their immovability compels the scholar to bring his eye closer to the object under observation, and does not leave him the choice of bringing the object nearer to the eye. At best, he is only allowed in reading a certain freedom in this respect ; in writing, reckoning, and drawing this is not possible.—(*To be continued.*)

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#### *WOMAN'S WORK AS TEACHER, AND HER PREPARATION FOR IT.*

IN these times, when our ablest and most thoughtful men are interested in the 'woman question,' when large space of our most respectable journals is daily and weekly given to the respectful discussion of female suffrage, I trust it will not be thought inappropriate for me, before a convention of teachers, a majority of whom are young women, to address myself especially to them. And I do so with less hesitancy, because I know it to be a frequent practice with speakers of the other sex to address their remarks solely to the 'brethren,' to give entire lectures, even courses of lectures, to young men, without the slightest compunction of conscience, and as if there were really nobody else in the



world. Sometimes, indeed, we feminines come into notice in a manner not the most flattering to our self-love.

‘ Oh, why did God,  
Creator wise, that peopled highest heaven  
With spirits *masculine*, create at last  
This novelty on earth, this fair defect  
Of nature? ’

sings Milton :— ‘ More than a thousand women is *one man* worthy to see the light of the sun,’ says Euripides flatly. Dr. Todd, in our time, finds it worth his while to devote a whole book to telling his lady friends that they are capable of nothing but marriage and maternity. The *Nation*, that prince of journals, cannot help speaking contemptuously of the ‘ inner light,’ which ‘ women trust to, and which the rest of the world knows nothing of.’

And finally, school committees, with the weight of the education of the ‘ coming man’ and coming woman upon their hands, will give a lady teacher only one-half, one-third, one-fourth, one-fifth as much salary as a gentleman, to take charge of their district school, and fear that they have made a poor bargain at that. It is the same old story ; flattery, a world of pretty compliments, any amount of sublime twaddle about ‘ angelic beings,’ lightly overlying just such sneers as I have mentioned.

‘ The praise of men is not a test of our praiseworthiness,’ says Whately, ‘ nor is their censure ; but either should set us upon testing ourselves.’

I have been interested in this matter of teacher’s wages ; I have been surprised to know that in Vermont the salaries of women range from \$8 per month (with board?) to \$750 per year, while those of men range from \$20 per month to \$1,600 per year.

Looking for the cause of this disproportion, I have gone from the wages to the work of women, and I confess to finding more cause for surprise and dissatisfaction here.

They tell us that the profession is crowded, but (I quote from the *Independent*) ‘ every school committee man knows that while there is a flood of applications to teach primary schools, the competition rapidly diminishes as the grade ascends ; while to obtain a good high-school teacher who

can take classes in Latin and French is exceedingly hard. As to Greek, it is not to be thought of.' And he goes on: 'It is very rare to find American-bred girls who are good linguists, either as to ancient or modern tongues. Of those who seek places as teachers the French accent is usually very bad, while the knowledge of Latin is of the most shallow and superficial kind. French must therefore be taught by a foreigner, and Latin by a man.'

One would think that inasmuch as teaching is an ancient and honorable profession—almost the only honorable profession of long standing for women, that some—more than an occasional one of the bright girls who are the pride of examination days at our academies, would have an ambition to stand high in it.

'There is room at the top,' you know Webster said of his profession; and it is true of this, not only that there is room there, but that there is need there, and no inequality in the matter of wages or esteem.

But our *Independent* writer evidently did not know all about the schools of Vermont. I think there are committeemen here who will tell you that it is not always easy to find *primary* teachers of the right sort.

People are beginning to wake up to the fact that very young children need very good teachers. Mothers, knowing by experience that if there is a mistake in the yeast, the bread will not be good—that there is more importance in the cutting of a garment than in its making up, look into the earnest eyes of their little ones, listen with hushed spirit to their wonderful questionings, pray God for wisdom to guide those first out-reachings of an immortal soul, and shrink from putting them in the care of a bungler, or even under a thoughtless, half-educated girl, to receive their first bias in mental culture.

And there is a lack of women to do *first-class work*—I do not speak unadvisedly—in schools of *all grades* in Vermont.

What becomes of the bright girls of our academies and high schools? Teachers tell us that these girls, while in the school, excelled their brothers in many, if not in all departments, that they stood highest in composition, history and mathematics. Some one adds, 'But they stop sooner; they reach maturity earlier than boys.' Why did he add that?

Is it a proper sign that a boy or girl has reached maturity because he or she has left school? Do those girls who have lingered there past twenty, show signs of having reached the limit of their capacity? 'They stop sooner.' The question is, Why do they stop so soon? There are the boys, their classmates, plodding on in college. After graduation, perhaps, they will work for a profession. They will all be married too, in due time, and does any one think they will make poorer husbands and fathers for not having frittered away that four or seven years?

Meantime the girls have been staying at home, corresponding with their sweethearts in college, making pretty dresses, and—teaching school. Very well, it is a good thing for girls to stay at home, *if there is any thing to do there*. I like girls to make themselves pretty dresses and pretty rigs of all sorts, if they do not give their main time and thoughts to it. I like girls to teach school, if they do give their main time and thoughts to it.

I hope I may not be misunderstood; I would not take away one particle of the bright romance of girlhood; I consider it a charmed period; I would not lay the burden of a finger on its sparkling joys, and I would not have the girls themselves to deaden and flatten life by leaving out of it its realities. Mrs. Browning says:

'Get leave to work in this world, 'tis the best you get at all,  
For God in cursing gives us better gifts than men in benediction.'

So when a girl, having acquitted herself well in the high school, is about to leave it, I would have her pause and ask herself what there is for her *to do*?—'the work good in itself that is good for her—the best she was born for.' If by the light of reason and conscience she decide that that work is teaching, let her consider the nature of her calling, and the preparation needful for it.

And here I cannot help wondering if every one who is now in the teacher's chair, as well as every unsuccessful applicant for such a position, has considered the matter carefully, and decided as in the presence of the Most High, that that is the work he or she is called unto. Are there none in school-houses solely on account of the miserable stipend

they receive?—none who are teaching to pass away the time, or for convenience, or because there seemed to be nothing else to do? How can there be so many failures if every one is doing one's best, and in the best manner?

As to the preparation needful for teaching :—we remember what we have read and heard all our lives about the importance of a teacher's work; we call up, as best we may, the facts of a teacher's position, and draw an inference therefrom that makes us tremble. And then comes a difficulty—a real mountain in the path. Where are the colleges and higher seminaries of learning for us? With a boy the only question is, What college shall I favor with my patronage? With a girl it is, What college is there to receive me? Our highest schools are only equal to their preparatory schools. Mt. Holyoke hardly goes beyond Phillips Academy. There is Vassar College; I wish the halls of that institution might be so crowded, and so many turned away from its doors for want of room, that some of our philanthropic, moneyed men, might see that it would be for their interest in a double sense, to found another and really meritorious Female College within the limits of the United States. I would like to see women so awake to their deficiencies and needs, that they would apply to themselves a proper proportion of the fine things that are saying in these times about culture and reform. I think it would not be long before some woman of God-given wealth, some mother in Israel, or some blessed maiden aunt, would make a will in favor of the girls; or better, a benefaction to be appropriated in her life to the endowment of a university that should be some approach to a Yale or a Harvard, for the young women of her own and future generations.

Meantime we need not be idle. Let us do thorough work in our preparatory schools, read, study and think, act in the light of conscience and the fear of God, do nothing shabbily or by halves. I wonder if the young teachers who come to these conventions year after year, know how much need there is of the advice so often reiterated: 'Prepare yourselves; do your work *well*.' Does any one know how many there are actually in school as teachers, who can read intelligibly; I mean who can take an ordinary book of poems

or of history, and sit down of an evening, and read so *distinctly* and so well, as to entertain a half dozen of friends without effort on the friends' part to be entertained?

Does any one know how many there are, who can not only recite the rules of grammar, but who speak English with tolerable correctness; whose verbs and nouns generally agree; who do not make adjectives do the work of adverbs, and adverbs the work of adjectives; who have thoughts on the important matters of life, and know how to express them clearly and intelligibly in conversation; how many there are who spell correctly, write a fair hand and punctuate properly?

Surely these things can be learned without going to college; but it takes work and time, and pains, more than we think.

What we want of the girls, then, is better preparation, more earnestness, more hard work; or rather, more thorough, more systematic, *better* work. It is not so hard to study principles as to kill time; perhaps it is a little harder to think; but, to use a common vulgarism, it pays better—oh, vastly better; for when you have succeeded in killing time, you have at best his ghost upon your hands, and it will haunt you on your death-bed if not before.

We want you to become better educated, to make more for yourselves, and more of life, not to get higher positions necessarily, but to fill *well* those you have. Time is too precious to be wasted; God's work is too sacred to be shabbily performed.

Hear what the good and great men of our time are saying to your brothers on these subjects; they would say them to you if they thought you were interested. Be interested; do not spend all your life among sticks and straws, when there is a golden crown not far from every one of us.—  
*From a paper read before a Teachers' Association.*

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“KEPATOMEATATERIN.”—This was the note sent by a farmer to the school teacher in the potato-digging season, to explain his boy's absence from school.

*HOW OIL-CLOTH CARPETS ARE MADE.*

THE cloth employed is burlap, a fabric made mostly in Dundee, Scotland, from jute fibre. It comes in bolts of one or two hundred yards, from forty inches to six feet in width. The first thing to be done is to cut the cloth into pieces twenty-five yards long, the length of a piece of carpeting when finished. A sizing of glue is then applied, and after allowing a sufficient time to dry, the cloth is again rolled up, about twelve pieces to each roll, and allowed to lie until ready for the application of the paint.

Before any of the figures are laid upon the cloth, it receives several coats of a uniform color, generally of a reddish brown, as a groundwork. The paint is composed of linseed oil and ochre. It is applied drawing the cloth through a machine consisting of rollers and scraping edges, which spread the paint evenly and rapidly over the cloth, one man standing by the machine and dipping on paint with a great ladle from a large tub standing near by. The room where this is done is nearly filled by several tiers of racks reaching from the floor to the top of the room, and twenty-five yards in length. Across the room, at the end of the racks, runs a track upon which the paint machine glides back and forth, so that it may be placed at pleasure opposite each tier. Each piece of cloth, as it passes through the paint machine, is drawn upon one of the racks, and there lies twenty-four hours to dry, when it is ready to receive a second coat on the other side. Standard goods receive six coats of paint, three on each side, but a cheap article must be contented with four.

After the second coat of paint is dry the cloth is taken to an adjoining room, and scoured by blocks of pumice stone moved by machinery, and assisted by broad knives in the hands of the workmen, to remove all roughness. This is repeated after the fourth coat.

Forty-eight hours after the last coat of paint is applied, the cloth is in condition for printing. To see this operation, we go to an upper room, where we find a number of large revolving tables on which are pads smeared with the several

colors wanted ; over each pad hangs a pot of appropriate paint, and a brush wherewith to apply it to the pad. By each table stand two workmen ; before them is a stationary table across which lies the cloth they are painting, and beyond this is a tier of racks for the painted goods to dry on, just as in the paint-room below. The painting is done from wooden blocks of the proper pattern, and generally eighteen inches square, so that if the piece of cloth is two yards wide one block covers one-quarter of its width. Each block prints only one color, so that there must be as many blocks as there are colors. The workman turns the revolving table, seizes a block from the freshly painted pad upon which it is lying, lays it carefully upon the cloth, presses it close by thumping it with an iron maul, and returns it to the pad ; while you see that a portion of the pattern, a single color, has been added to the groundwork. As soon as he is done with one color, he pushes the table until it brings the next block within reach. In this way he uses block after block until all the colors have been applied and the figure on that portion of the carpet now before him is complete. The cloth is then drawn forward eighteen inches, and another section of it receives the same treatment. If the cloth is wide, two men work side by side, each printing half the width. The body of the paint used in printing the figures is composed of the best oil and white lead. The blocks and the pads have to be carefully cleansed with naphtha at the close of every day's work.

After the printing, the fabric lies upon the rack two weeks, at the end of which time it is dry enough to be rolled up and carried to the baking-house. In this house is a lattice-work floor, through which there is an easy circulation of air. The rolls of carpeting are stood on end partially unrolled to admit air to all parts of them. The temperature of this house is, when the carpeting is first brought in, at 75 or 80 degrees Fahrenheit, but during the three weeks that the rolls stand here, it is raised to 90 degrees. This hardens the fabric sufficiently for the next operation, which is varnishing.

The varnishing is done very much like the painting, by drawing the carpeting rapidly through a machine where the varnish is put upon the surface, distributes it evenly, and

without waste. This machine is the invention of the members of the firm. The old way was by hand, one man pouring on the varnish, and others spreading it with large, long-handled brushes, looking like floor brushes. In summer time this was done upon the ground in open air, and not unfrequently the sticky surface did a lively business in catching grasshoppers, and whatever the wind chanced to blow that way.

After the varnish is dry, the edges of the cloth are pared straight, the number of the design with which it is printed is affixed to the back of the roll, and it is ready for market.

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### *SOMETHING ABOUT FACES.*

**D**OGS alone supply the outlines of half the faces we know. There is the bull-dog—that man in the brown suit yonder, with bandy legs and heavy shoulders—did you ever see kenneled muzzle more thoroughly the bull-dog than this? The small eyes closed under the brows, the smooth bullet forehead, the heavy jaw and snub nose, all are essentially bull-dog.

Then the mastiff, with the double bass voice, and the square-hanging jaw; and the shabby-looking turnspit, with his ear out at all sides, and his eye drawn up to its roots; and the greyhound, lean of rib and sharp of face; and the terrier—who is often a lawyer—with a snarl in his voice and a kind of restlessness in his eye, as if mentally worrying a rat—his client; and tyke, all beard and moustache and glossy curls, with a plaintive expression of countenance and an exceedingly meek demeanor; and the noble old Newfoundland dog, perhaps a brave old soldier from active service, who is chivalrous to women and gentle to children; and who repels petty annoyances with a grand patience that is veritably heroic.

Reader, if you know a Newfoundland dog-man, cherish him; stupid as he probably will be, he is worth your love. Then we have horse-faced men; and men with camel lips:



and the sheep-faced man, with his forehead retreating from his long, energetic nose—smooth men, without whiskers, and with shining hair cut close, and not curling, like pointers; the lion man—he is a grand fellow; and the bull-headed man; the flat serpent head; and the tiger's, like an inverted pyramid; and the giraffe's lengthy unhelpfulness; and the sharp red face of the fox. Don't we meet men like these now-a-days every step we take? and if we know any such intimately, don't we invariably find that their characters correspond somewhat with their persons?

I know a woman who might have been the ancestress of all the rabbits in all the hatches in England. A soft, downy-looking, fair, placid woman, with long hair looping down like ears, and an innocent face of mingled timidity and surprise. She is a sweet-tempered thing, always eating or sleeping, who breathes hard when she goes up-stairs, and who has as few brains in real working order as a human being can get on with. She is just a human rabbit, and nothing more; and she looks like one. We all know the setter-woman—the best of all types—graceful, animated, well-formed, intelligent, with large eyes and heavy hair, who walks with a firm tread, not a light one, and who can turn her hand to anything. The true setter-woman is always married; she is the real woman of the world.

Then there is the Blenheim spaniel, who covers up her face in her ringlets, and holds down her head whenever she talks, and who is shy and timid. And there is the greyhound-woman, with lantern jaws and braided hair and large knuckles, rather distorted. There is the cat-woman, too; elegant, stealthy, clever, caressing, who walks without noise, and is great in the way of endearment. No limbs are so supple as hers, no backbone so wonderfully pliant, no voice so sweet, no manner so endearing. She extracts your secrets from you before you know you have spoken; and half an hour's conversation with that graceful, purring woman has revealed to her every most dangerous fact it has been your life's study to hide. The cat-woman is a most dangerous animal. She has claws hidden in that velvet paw, and she can draw blood when she unsheathes them.

There is the cow-faced woman, generally of phlegmatic

temperament and melancholy disposition, given to pious books and teetotalism. And there is the lurcher woman, the strong-visaged, strong-minded female, who wears rough coats, with men's pockets and large, bone buttons, and whose bonnet flings a spiteful defiance at both beauty and fashion. This is that wonderful creature who electrifies foreigners by climbing their mountains in a mongrel kind of attire, in which men's trousers form the most striking feature; and who goes about the business of life in a rough, gruff, lurcher-like fashion, as if grace and beauty were the two cardinal sins of womanhood, and she were on a "mission" to put them down. This is not a desirable animal.

We have women like Merino sheep; they wear their hair over their eyes and far on to their necks. And women like poodle-dogs, with frizzy heads and round eyes; women like kangaroos, with short arms and a clumsy kind of a hop when they walk; and we have active, intelligent little women, with just the faintest suspicion of a rat's face as they look after the servants and inspect the mysteries of the jam closet. Then there are pretty, little marmoset faces. I know the very transcript of that golden-haired Silky Tamarin in the Zoological Gardens. It is a gentle, plaintive, loving creature, with large, liquid, brown eyes, that have always a tear between them, and a look of soft reproach in them; its hair hangs in profusion of golden-brown curls—not curls so much as a mass of waving tresses; it is a creeping, nestling, clinging thing, that seems as if it wants always to bury itself in some one's arms—as if the world outside were all too large and cold for it.

There is the horse-faced woman, too, as well as the horse-faced man; and there is the turnspit woman, with her ragged head and blunt, common nose. In fact, there are female varieties of all the male types we have mentioned, excepting, perhaps, the lion woman. I have never seen a true lion-headed woman, except in that black Egyptian figure, sitting with her hands on her two knees, and grinning grimly on the Museum world, as Bubastis, the lion-headed goddess of the Nile.—*English Paper.*

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## GEOGRAPHICAL NOTES.

UNITED STATES.—A correspondent of the *Western Home Journal* (Lawrence, Kansas, Sept. 19,) with the United States Geological Survey, gives a description of the Yellowstone Falls, which is, perhaps, worth reproducing for some of the particulars. The approach was from above:

"Above, the deep, green water, as it approaches through the gorgeously colored wall, is whitened by the glistening of the waves; then, as it proposes to make the grand descent, the colors deepen into the richest possible shades of green and brown, over which play and dance thousands of lines of skipping light. Just on the brink all is suddenly changed into a clear, glassy green, of wonderful purity and beauty; this color is gradually softened and blended into a lilac tint of the softest and most delicate hue that can be conceived. Over these colors as a ground-work, the rich, creamy foam descends in graceful folds and festoons, blending together in a most enchanting harmony the whole sheet of falling water. About midway in its descent, the fall plunges into a cloud of ascending spray, and is lost; while from the great depth of the cañon comes a deep, steady roar as of distant thunder. Fully six hundred feet below where we stand, a very thin, wiry stream of water emerges from the mist, and hurries away, whirling and foaming down the winding gorge below."

Another party of the Survey descended Snake River to the Tetons—a range of mountains in Idaho, just on the border of Wyoming, and having an Alpine character. The same correspondent writes (date of Aug. 17):

"The highest peak in the Tetons range has been climbed by Mr. Stevenson and Gov. Longford. Dr. Hayden told us that one might as well undertake to climb a 5,000 foot liberty pole, as to try to climb Teton peak. The last 300 feet were gained by cutting holes for their feet with knives and hatchets, and at one time Mr. Stevenson had to cling to a boulder with his arms, while he drilled with his boots a foot-hole in the ice and snow—a letting go of his hold would have plunged him down over a precipice of 1,000 feet. This peak is thirteen thousand two hundred feet above the sea, and to-day in a meeting held by the entire survey, we have christened it. Mount Hayden, in honor of the Doctor, who has been engaged in the survey of the Territories for the last fifteen years."

A correspondent of N. Y. *Herald* with Mr. Stevenson tells of the exploration of an extinct volcano on the way to the Tetons. The crater is about half a mile long by a quarter

of a mile wide, "and, with its rocky sides broken by the wear of time, it presents the appearance of a ruined amphitheatre." At the foot of this mountain was a jagged rock mass, which the explorers named "Kenilworth Castle." In visiting it on the descent, they were surprised to find the sides of the fancied "banqueting hall" covered with Indian sketches, cut into the soft sandstone. "There were buffaloes, elk, horses, deer, warriors, all drawn with an accuracy that left no doubt of the originals. The whole was connected by a series of hieroglyphics, illustrating some historical event."

—On the 17th of September the interesting Dutch colony of Holland, Ottawa Co., Michigan, celebrated its twenty-fifth anniversary. It owed its foundation to the persecutions visited upon the Reformed Church in Holland thirty-five years since, which in 1847 provoked an emigration quite similar to the more famous one two centuries and a half ago. Dominie Van Raalte was the leader of this one, and still lives to preside over the welfare of the colony. There are five Dutch and one English newspapers printed in Holland. The town was three-fourths destroyed by the great forest fires of October, 1871, but has nevertheless continued to prosper. In the beginning the colony was reinforced by Hollanders from St. Louis and Albany; but it soon began to draw on the old country, and still grows by direct immigration thence. The number of these Dutch settlers in Ottawa, Kent, and Allegan Counties, is estimated at 25,000. Any American desirous of learning to speak Dutch, has only to visit these people, and make his stay long enough.

EUROPE.—In the old French province of Provence is the Department of Basses-Alpes, and of its arrondissements of Barcelonnette and of Castellane here is a pleasant picture drawn by M. Claudio Jannet:

"Primary instruction is wide-spread, thanks to the long winter leisure. The stranger who traverses these valleys, observes with surprise that all the inhabitants, without exception, speak French correctly, and know how to read, write, cipher, and spell (*mettre l'orthographe*). Nor in this are the women behind the men. It is said that a young girl who cannot read and write actually finds it hard to get

married. Children owe their education to domestic teaching even more than to the schools. In the night watches there is reading and conversation in these families of mountaineers. The readings, taken from the Bible and from the Lives of the Saints, inspire the hearts of the young with the principles of morality, which are the basis of education, and at the same time they promote instruction. No legal constraint could obtain results approaching those which are produced in this region by public sentiment and the right organization of the family.

"Families are very fruitful, but their fecundity does not prove burdensome, inasmuch as emigration from these parts is regular and normal. Every year the excess of population emigrates—not only to Marseilles and Paris, but even to Mexico. The valley of Barcelonnette especially has a very important colony in Mexico, and each village is in constant communication with its own emigrants. The new comers are welcomed by their predecessors, who take them in as clerks, and afterward leave their business to them when they return to their native land. In fact, these emigrants never lose the desire to return. When they can, they go back to establish themselves among their mountains, and employ their savings, often considerable, in purchasing an estate.

"In the highest valleys, where agriculture is impossible during six months of the year, the heads of families leave home at the beginning of winter to ply their trade of peddler, either at Lyons, or in the towns of Flanders. Every village, from time immemorial, has sent its men out in this manner into one or other of these districts. They all start together, and also return together toward Easter. Both their going out and their coming back are accompanied by solemn prayers. The money they pick up in these excursions varies from 500 to 2,000 francs, and ensures them a little ease for the rest of the year."

—It is a pity that Greece and Massachusetts are not neighboring States. Their populations are almost exactly the same in point of number—differing only by some hundreds, in fact—that of Greece being 1,457,894; and Greece has a surplus of 50,458 men against a corresponding surplus of women in Massachusetts. The union of these surpluses would be eminently gratifying to those social philosophers and statisticians who are grieved by the present disparity. Nor is such a union an altogether fanciful idea. There is much in the modern Greek to remind one of the Yankee character, and he is, it is well to remember, not a lineal descendant of the Greek of Marathon and Chæronea. Slavic names abound in the peninsula. In Acarnania a lake is called *ozéro*, as in Russian. Parnassus and Helicon now

have the barbaric name of Zagora, the word *gora* meaning mountain in Russian. Lake Copais, in Bœotia, is called Topolias, after a Russian word *topoli*, meaning poplar. Other instances in plenty might be given. Fallmerayer, who wrote a "History of the Morea in the Middle Ages," contended that the modern Greeks were a mixture of Slavs, Albanians, Wallachians, Jews, Turks, Italians, and Bohemians.

AFRICA.—Letters from Dr. Livingstone, dated July 2, 1872, have been received at Zanzibar. He was still at Unyanyembe in good health, and was awaiting the arrival of Mr. Stanley's second American relief expedition. *Pau* Mr. Stanley, it is proper to put on record the dissent of the British geographers from Livingstone's conclusions concerning his late discoveries, in so far as he connects them with the Nile. At the meeting of the Royal Geographical Society which Stanley attended, Dr. Charles Beke said it was by no means pleasant for him to have to recant the opinions which he had so long maintained, but he was perfectly convinced that Livingstone had not discovered the sources of the Nile. Capt. Speke made Tanganyika 1,700 ft., Baker made the Albert Nyanza 2,700 ft., or, as it has been corrected, 2,500 ft. Even making an allowance of 200 ft. or 300 ft., it seemed impossible, on account of the levels, that the river Lualaba should flow into either of those lakes. He concluded that the Lualaba must either go into the Ulle, or into some lake, or turn round to the Congo. He did not, however, think it went to the Congo, owing to the ascertained levels. The *Academy* of Sept. 1 says:

"The Lualaba could not join the Albert Lake, as it lies upwards of 500 feet above the given elevation of the river, not to mention the very mountainous country of Ulegga, spoken of by Speke, Baker, and Livingstone, which intervenes to prevent it. Dr. Schweinfurth's explorations, carried on contemporaneously with those of Livingstone in Manyema, by tracing the rivers forming the Bahr-el-Ghazal to their sources, have shut off the only inlet which seemed possible to Dr. Livingstone himself. The conclusion is evident that Livingstone, though searching for six years with this object in view, has never once seen the Upper Nile at any point. It has been suggested that a great inland lake may receive the waters of the Lualaba, but such a continental system in the equatorial forest region of Africa, saturated

by double rainy seasons, is a physical impossibility. Any lake in this belt must overflow. The only outlet on the west coast, capable of discharging such a volume of water as that accumulated by the Chambeze-Lualaba and its lakes, is the Congo; and the second conclusion forced upon us is that it is the Upper Congo river which the great traveler has now made known.

"The results of Dr. Schweinfurth's latest remarkable journey in Dar-Fertit in the beginning of 1871 are fully described in the current part of *Petermann's Mittheilungen*. In former journeys Dr. Schweinfurth had explored and mapped out the source country of the Rohl, Tonj, and Jur tributaries of the Nile rising westward of Gondokoro. These rivers flowing northward unite in the Bahr-el-Ghazal, which joins the Nile above the ninth parallel of north latitude, and have hitherto been considered as the chief streams of this lateral system. In his last journey, however, the traveler, by going westward, has crossed the upper streams of a river named the Abu Dinga, which he identifies clearly with the Bahr-el-Arab, a tributary of the Ghazal formerly considered to be of small importance, but now proved to be the longest and largest branch of the Bahr-el-Ghazal system.—Ernest Marno, a traveler in Upper Sennaar, has sent to Gotha a full report of his journeys in this region during 1870-'71, and a most valuable map, which it is said will add greatly to our knowledge of the territory of the Abyssinian Nile."

—A new caravan route from Wadai (in Soudan) to Egypt has been opened, independent of that from Darfur to Siout. It reaches the Nile two or three hours' distance below the pyramids. This is a new source of wealth for Egypt and of misfortune for the victims of slavery.

—The population of Madagascar has never been accurately determined. Ellis, in his history of the island, reckoned it at 4,450,000. Consul Pakenham placed it at 5,000,000, among them 5,000 Christians; Barbié du Bocage, at only 3,000,000. Alfred Grandidier, the gold medallist for 1872 of the Paris Geographical Society on account of his explorations in Madagascar, is inclined, from careful observation and inquiry, to allow a population of something more than 4,000,000. The "Christians" alone now amount to not less than 3,000,000—an over-night conversion by the queen's command. The coast natives are daily diminishing. The north-eastern half of the island, and the most beautiful and productive, is held by the Hovas, a race apparently of Malay extraction. Their women are extraordinarily fruitful.

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—Dr. G. Neumayer's essay on the exploration of the South Pole, in No. 38 of the *Journal* of the Berlin Geographical Society, has been published in a separate form. It is a full résumé, extending over fifty pages, of the literature of the subject, illustrated with a very good map, and gives the details of a scheme which he laid before the Geographical Congress at Antwerp for prosecuting a further exploration of that region. He proposes that it should be combined with an expedition to observe the transit of Venus, and, starting from the Cape of Good Hope, and making the M'Donald Group head-quarters, should endeavor to push on from Kemp's Land toward the pole. At the close of the pamphlet is a full list of works and maps relating to the subject.—*Academy*, Sept. 1.

—News from Captain Burton states that he is pushing forward over the vast snow ranges in the unexplored portions of Iceland, and in the course of a few weeks it is expected that he will have examined the chief geographical features of this region, which it is said has never before been visited by man. Communication will be maintained via Copenhagen and Lerwick (Shetland Islands) by the Danish Government steamer *Diana*, so that the exploration—the result of which is looked forward to with great interest by the Icelanders as well as by men of science in this country and elsewhere—may be prosecuted as long as the weather is favorable. Meanwhile it may be well for any one to whom this famous island is still little known, to procure and read Prof. C. W. Paijkull's "Summer in Iceland" (Philadelphia: J. B. Lippincott & Co., 1868) It is a remarkably full and entertaining description of that peculiar country, in speaking of whose customs, it has been said, a foreigner must employ a great many negatives:

"He will observe first, if you please, that 'there are no snakes there;' and then that the houses have no chimneys, and no fireplaces for warmth; no ovens, no floors, no ventilation, no light, and no cleanliness; no security against damp and vermin; that the farmers have no agricultural implements, and nobody any carts; that the graveyards have no tombstones; that there are, with one exception, no public schools, and no poor-houses, and no executioner; no woods, in the common acceptation of the term, and consequently no timber for building or fuel; no thunder in the summer time; no prejudice against homœopathy, but the contrary; no male tailors. Bread is baked in an iron pot, and is not a constant article in an Icelander's diet. If he be poor, he will eat dried fish smeared with butter instead. Meals are taken sitting on beds in place of chairs. The horses refuse oats. Turf and dung, and even fish-bones and seaweed, are used for fuel. Children are taught at home, and examined there and at church by the minister; there are no illiterate Icelanders,



and few who are not proficient in history and geography. There are also few who do not drink brandy with considerable frequency, at sixpence the quart; importation of which increased nearly eighty per cent. from 1849 to 1862. Add the universal habit of snuff-taking; the common need, but not use, of insect powder; and a more than German practice of kissing among the men, and you have a people with whom a protracted stay, or even a brief entertainment, would seem intolerable."

—Dr. Schweinfurth, the renowned German explorer in Central Africa, is about to return with the object of continuing his explorations, chiefly in the interests of botany. His brother, a merchant at Riga, has come forward with a handsome sum of money, the interest of which will be given to aid Dr. Schweinfurth in his undertaking, and will afterwards be handed to the Polytechnic School of Riga, to found a prize to defray the traveling expenses of future explorers who may have studied there with success.—*Nature, Sept. 5.*

—Sir Walter Elliot read a paper before the British Association in August, on some of the earliest weapons in use among the older inhabitants of India, in which he observed that Prof. Huxley, in classifying the varieties of the human race, exclusively for physical characters, had included under one head the people of New South Wales, of the Highlands of Central India, and of Ancient Egypt, all of whom he includes under the term Australoid. Now it is a remarkable coincidence that among these three far-distant peoples the "throw-stick" was the weapon of the chase, and that examples do not occur in the intermediate countries. The pictures in the tombs of the kings at Thebes represent hunting scenes, in which the curved sticks found at this day in India are extensively represented. The boomerang of Australia is precisely of the same form, but, being thinner and lighter, is so fitted to have a recoiling property.—*Nature, Sept. 5.*

—Sir G. Young read a paper before the same association on Asiatic emigration to the West Indies. He stated that the Indian population of British Guiana had been recently estimated at 7,000. The negro population in 1861 was 93,000, and although it showed in ten years an increase of only 9,000, or under one per cent. per annum, yet there were signs of a future larger increase; and the author believed it would be allowed that the establishment of the negro race here, as elsewhere on the American continent, was a permanent fact in modern geography. The negroes in British Guiana were, however, of little service to the planters, and it was a matter of great moment to know whether the new Asiatic immigration would hold its own in the colony. Since 1843 there had arrived 153,797 Eastern laborers in the various colonies of the West Indies, of which number British Guiana had received 89,264. The annual immigration for the last five

years has been 7,862, with no signs of falling off. Although a return passage is allowed after ten years' residence, only 15,000 out of 137,000 had claimed it. The average number who leave British Guiana annually has been, for the past five years, only 312. The author believed that the Chinese coolie would die out, and the East Indian continue to multiply in the West Indies; but whether the latter, who was too feeble to fell and cultivate the virgin forest, would hold his own against the negro, depended on the chance of a reform in negro habits, which at present tended to relapse into barbarism. [As to which last, and the causes of it, one should read "The Coolie," by the author of "Ginx's Baby." New York: Geo. Routledge & Sons, 1871.] —*Athenæum*, Aug. 31.

*Cartography*.—An atlas of France, in four volumes, quarto size, containing ninety-five maps with ninety-four geographical and statistical notices, by Adolphe Joanne, may now be had (second edition, revised) for forty francs, of L. Hachette, Paris.

—The active exploration by the Russians, during the last few years, of the geography of the region of Mongolia lying next to their Siberian possessions, and the establishment of new relations, political and commercial, with these countries, would lead us to suppose that the annexation of these lands to the great empire is seriously contemplated. A very important map of this region accompanies the last part of *Petermann's Mittheilungen*. It is based on Klaproth's map of Central Asia, which was drawn from the surveys made by the Jesuit missionaries of Peking by order of the Emperor Khian-loung, and upon that of M. Veniukov which accompanied the seventh number of the *Izvestija* of the Russian Geographical Society for 1871; but the map is filled in and greatly amended from the journeys of the Russian travelers Schishmaref (1864-'65), Palinof, and Matusovski (1870), containing besides a reconstruction of the routes of Prinz (1863) and the artist Atkinson, so far as they bear upon this part of Asia. These tracks cross Mongolia in sufficiently various directions to form a trustworthy basis on which the detailed topography of this inner Asiatic plateau may now be accurately laid down.—*Academy*, Sept. 1.

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PUNCTUATION is a wonderful thing. A man telegraphed to Burlington for a school, "Shall I come, or is the place filled?" The answer properly was, "No. Place filled on the 17th." The telegraph operator received it, "No place filled on the 17th." He went for it and was minus traveling expenses.

*A SCHOOL POST-OFFICE.*

THE idea of having a post-office in school may be a novel one to many. My attention was first directed to this subject by reading a description of a school post-office; I resolved to establish one in my own school, upon an entirely different plan. This resolution I carried into effect. Its results may be of interest to my fellow-teachers. In the first place I purchased a lozenge box, cut a hole in the cover large enough to slip a letter through, and nailed it up in my school-room. I then made out a list of regulations, something like the following:—

1. Mail distributed each morning.
2. Each letter written by one scholar to another, must contain a question pertaining to some subject presented in some text-book used in the school.
3. The scholar receiving the letter, must answer it and the question it contains, within one week from the time received, and also state in his letter the number of mistakes found in the letter received.
4. Letters must contain no matter not pertaining to the school.
5. If scholars receive letters which they cannot answer, they may write and ask the teacher to assist them.
6. All written exercises given out in the classes must be directed to "The Teacher," and put in the office.
7. The postmaster will inform the school secretary of the number of letters distributed each morning, who will make a record of it in the school journal.
8. The teacher will claim the privilege of inspecting the letters at any time before distributing.
9. Each morning the postmaster will collect the letters distributed the day before, and pass them to the teacher, who will correct and return them the next day.
10. The school secretary will make a record of the letters free from errors, and also state by whom written.
11. Letters must be neatly written, and properly directed.
12. The teacher would be pleased to correspond with any scholars upon any subject pertaining to their lessons or to the school.

These regulations I read to the school, explained the object of the post-office, advised each scholar to purchase a small blank book, and keep a record of the questions asked and answered, appointed a postmaster and a school secretary, and explained to them their duties.

The result of my experiment was a great interest on the part of parents and pupils, a full mail every morning, a neatly kept school journal, and a decided improvement in the language, spelling, punctuation, and writing of the children. They also acquired a vast amount of general knowledge; the writing of which fixed it firmly in their minds. There were twenty-five scholars attending school, but eight of whom could write. During a term of twelve weeks, eight hundred letters passed through the office. Most of these letters were written out of school hours. The largest mail distributed at any one time was seventy-four letters. The questions asked were all sensible, and most of them original.

I frequently wrote letters to the scholars, explaining the import of the different papers used in business, and requesting them to write various kinds. The result was that I had at the end of the term a large package of notes, bills, receipts, invitations, orders, advertisements, business cards, etc., to show to the committee and friends attending the examination. The children thus gained a great deal of *practical* knowledge, and the parents were permitted to see specimens of their children's industry.

I have received the eulogiums of parents on the plan given above, and know that it has added to the interest of my school. I think it would be more interesting in a large school. It would then, I think, be better to have the mail distributed but once a week. Any exercise which calls for a frequent use of pen or pencil, is of benefit to children, and if the exercise can be made to *seem play*, all the better,—that is, if the same results are produced. I would advise all teachers who desire to increase their own reputation and to improve their scholars, to try this plan and to mark its results. Teachers who are afraid of work, or distrust their own ability, should not try it; for it requires considerable time, and also a large stock of information in regard to the branches taught.—*Eliza H. Morton, in Mass. Teacher.*

*AN ENGLISH SCHOOL SQUABBLE.*

CONSIDERABLE interest is being manifested in a case at Stalybridge, England, in which a question as to the powers of the School Board of that town, has been raised by one Jonathan Schofield, a mill operative to that place. When the notice was served on him requiring him to send his daughter, aged seven years, to school, he sent a letter to the Board stating that she stayed at home to look after domestic matters, and that he was qualified to teach her when he came home in the evening. The letter concluded with the following passage: "I would ask if the affairs of my family are in matters of this kind no longer to be regarded by me, but by you? If the edicts of the School Board, etc., are to supersede parental authority, then why did God make me into the father and guardian of five fine healthy children?" A reply was sent by the clerk to the effect that there did not appear from the letter to be any reasonable excuse within the meaning of the elementary educational act, and advising Schofield to attend personally before the Board.

Schofield sent a long letter in answer to this, in which he stated: "I claim a full right to say what my children shall be taught, and who shall teach them, as I do to say what they shall eat and what they shall drink. It may be true that some acts of Parliament give you the power you wish to exercise, but there is a law, older than any act of Parliament, which makes every father responsible as the teacher and guide of his own offspring, and this law no human authority has any right to abrogate." He then complains that a minister and also a member of the Board are not compelled to send their children to school, and concludes as follows: "Is there really one law for the rich and another for the poor? I have only to add, knowing in what manner my last letter was received (with laughter), I feel I should be wanting in self-respect were I to attend your meeting, and therefore decline doing so." A summons was issued against Schofield, but we are not informed of the result of the inquiry before the magistrates.

*DISCIPLINE AGAIN.*

IN all large institutions, German, English, and American, a Janitor is employed. It is the custom, in some countries, to vary the monotony of this good man's round of sweeping and dusting by transforming him into a self-working, back-action whipping-post, the Principal acting as castigator. The fact is, but little if any difference can be found in the inner working of large schools, wherever found. In all educational institutions, the Principal's most important duty is overseeing Assistants and pupils. This is a very delicate task, for too often is he called on to decide on troubles arising, on the one hand from a lamentable ignorance of the human mind, and from the hasty impulses of youth on the other. He is the temporary father of the flock, vested with parental rights. Now, doesn't it strike you that it would be rather an absurdity for the Trustees of the town of Alameda to furnish out a "thoroughly qualified man," whose duty would be to place himself in a public position, placarded after this fashion: "PUBLIC WHIPPER! Patent, well padded, and easily adjusted screws, bands, belts, and straps! Flogging neatly and promptly performed, suited to the nature of the offense. No pains spared to give entire satisfaction." I might carry out the picture by painting the assortment of tools:—A goose feather for the boy whose greatest sorrow would be an apparent exile from a first place in his parent's heart; a leather strap for the impulsive romp; cowhides, pickets, or a gate post, for those who have "been there" before. But I should be wasting space. Let me ask, would this official be very extensively patronized? Hardly. Parents rightly feel that whatever is done in the line of correction, should be regarded as a sacred duty, to be sacredly done. Even so with the teacher—his own experience in boyhood, his knowledge of the offender and the offense, his educated temperament—all point him out as the correct judge and the only proper executor. One principle is all-important: There must be a connection between the offense and the penalty. If you say to an offending scholar, "When — comes around, you'll get a thrashing for that,"

what actual difference is there between the resultant rain of blows in such a case, and the back blow or kick with which a boy resents a real or fancied injury? None. Both are instances of revenge. The first is sugar-coated with authority, and gilded by the name of "punishment;" the second, riding a smaller horse, is a quarrelsome young ruffian, who must be punished, *for not remembering that punishment is revenge!*

Now, I may endanger what little reputation I have as a schoolmaster, but I distinctly lay down the rule that punishment ought to be banished, not only out of schools but out of the world. Observe, I don't say *can*, but *ought*. My reason is this: God made this universe on geometric principles. It is a fundamental axiom of geometry that "like produces like." Every blow laid on the person of a child is a step whence springs up an evil passion. As an instance of the direct connection between offense and penalty above referred to, I will cite our mental and physical natures. Evil communications leave their baleful impress on our minds; contact with edged tools or heated substances leaves an unwelcome memento on our bodies.

I *did* once hear a teacher assert that these were the forms of revenge that Nature took for transgressions of law; but, as there was no tribunal handy for trying murderers of poetical imagery, the benighted being escaped unchanged. If you put your fingers in a flame, eat unripe fruit, unconsciously drink from a poisoned spring, or dam the course of a rushing stream, you set yourself in opposition to the condition of things established at that memorable period when the fiat went forth—"Let there be light." Here is cause and effect. You handle a knife and you are cut; you meet with flame and you are burned; you drink of poisoned water and you are convulsed; you stop a river and you are drowned; pull my bell rope and you have an alarm. These are natural effects, springing from natural causes. Effect follows cause as light follows the sun.

The nearer you can get to this reciprocal system of discipline in school and political life, the nearer you approach the millennial period. I suppose I am asked what is my parallel? So far as my own experience goes, I think I can

answer: I would select a school governor strong in possession of what many call *magnetic influence*, but which I regard as Will Power. Having this quality, he will be enabled, if properly aided by parents, to erect in the minds of his charges a common standard of right. Arriving at this stage, the simplest method of computation may be made available. Put the whole record of the scholar on paper; make it stare him in the face—an ever-visible reminder—and, with an intelligent and conscientious parentage, your purpose will be effected.

I contend that the system of checking used in all of the large schools in the United States and Germany, rightly carried out, is the nearest approach to a "natural method" of discipline and instruction. Of course, it requires some degree of skill to make this efficient; but, with all the ingenuity of the teacher, a credit in an unappreciable, fault-finding home circle is about as valuable as copper coins were to Robinson Crusoe in his solitary sojourn on the island of Juan Fernandez. The idea of punishment, as at present understood, need have no part with such a record. Why? Each mark acts as an exponent of the pupil's proficiency or standing. A child transgressing school rules deprives himself of the enjoyment of a clean record. In this case, the teacher gives no punishment—he is simply tolling the knell of a still-born pleasure. I have found these checks a very powerful auxiliary in my peculiar system of discipline. Never having struck a blow in the course of some six years' teaching, I have had recourse to personal influence in the creation of an emulative spirit. With pupils under my own eye, this course has been invariably successful, when uninterrupted by parental thoughtlessness. With smaller children—those but seldom within reach of my own personal influence—I have been sometimes compelled to use force to compel obedience, although, even in such cases, I have endeavored to measure quantity and quality with such nicety as to drown resistance, without throwing into the case any feature that would be taken by an impartial observer for revengeful assault. I have had strong, manly, noble boys (and all honor to them!) proudly dash away a tear as their perfection melted before the ardor of their own



impulses ; and I have had high-spirited and intelligent girls, just budding into womanhood, bitterly bewailing the suicide of a credit as if their hearts would break. I tell you, sir, the energy and ambition born of this experience will strengthen their vitality and "make a man" of your boy, and, for that matter, of your girl too.

Let your teachers alone ! They make discipline and instruction a study—I fondly imagine, a science ! Your boy or girl that you "can't do anything with" is only one of over a hundred raw recruits in the Army of Progress. With many undisciplined at home, too often uncared for, order and obedience are their hardest lessons. There can be only one master in this assembly—the teacher or the taught. You lawyers, doctors, printers, carpenters, and milliners would make a great outcry were some patron to insist on showing you how you were to do his work. Pinch us on the arm—you'll find us flesh and blood ; lay your hand on our heart—it beats like yours ; handle us, originally of clay—it isn't of the class called putty ; talk to us—you'll arrive at the conclusion that we have the same conscience, the same desires, the same ambitions, as yourselves. Some of these days I am going to paint a nondescript animal that shall embody the popular notion of a patient and forbearing instructor. Thus far I have only gathered the skin of the rhinoceros and the heart of a mosquito. Until then, allow us more charity and less criticism ; more judgment and less prejudice ; more support and less opposition, and you will be rewarded by more happiness and contentment in the little hearts about your family table.

One word in relation to the female question, and I have done : To reassert the position taken by me before the State Convention of last year, I regard male teachers as out of place in the Primary Department ; but I have found that, in our higher Departments, the stronger will and greater vitality of the masculine were very strong points in his favor. I am not the one to sneer at female excellence in any capacity. I have visited schools principaled by ladies, and have envied their world of tact ; but, to hold that they are, as a class, the superior of the male as instructors, is an advance in the Woman's Rights movement not war-

ranted by fact, and which I should be very unwilling to indorse.

One thing must not be lost sight of: Children are not sent to school solely to have their noses poked into an atlas or a speller. The great mission of the school room is to form habits of study and self-discipline—to hew the rough block of humanity into the diviner image of an intellectual God-head. To effect this, I would honestly prefer the stronger nature of the male, after a certain point is reached.  
—*W. W. Stone.*

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### WHAT KNOWLEDGE IS OF MOST WORTH?

#### X.—USES OF SCIENCE.

RECOGNISING the true position of æsthetics, and holding that while the cultivation of them should form a part of education from its commencement, such cultivation should be subsidiary ; we have now to inquire what knowledge is of most use to this end—what knowledge best fits for this remaining sphere of activity. To this question the answer is still the same as heretofore. Unexpected as the assertion may be, it is nevertheless true, that the highest Art of every kind is based upon Science—that without Science there can be neither perfect production nor full appreciation. Science, in that limited technical acceptance current in society, may not have been possessed by many artists of high repute ; but acute observers as they have been, they have always possessed a stock of those empirical generalizations which constitute science in its lowest phase ; and they have habitually fallen far below perfection, partly because their generalizations were comparatively few and inaccurate. That science necessarily underlies the fine arts, becomes manifest, *à priori*, when we remember that art-products are all more or less representative of objective or subjective phenomena ; that they can be true only in proportion as they conform to the laws of these phenomena ; and that before they can thus conform the artist must know what these laws are. That this *à priori* conclusion tallies with experience we shall soon see.

Youths preparing for the practice of sculpture, have to acquaint themselves with the bones and muscles of the human frame in their distribution, attachments, and movements. This is a portion of science; and it has been found needful to impart it for the prevention of those many errors which sculptors who do not possess it commit. For the prevention of other mistakes, a knowledge of mechanical principles is requisite; and such knowledge not being usually possessed, grave mechanical mistakes are frequently made. Take an instance. For the stability of a figure it is needful that the perpendicular from the centre of gravity—"the line of direction," as it is called—should fall within the base of support; and hence it happens, that when a man assumes the attitude known as "standing at ease," in which one leg is straightened and the other relaxed, the line of direction falls within the foot of the straightened leg. But sculptors unfamiliar with the theory of equilibrium, not uncommonly so represent this attitude, that the line of direction falls midway between the feet. Ignorance of the laws of momentum leads to analogous errors: as witness the admired Discobolus, which, as it is posed, must inevitably fall forward the moment the quoit is delivered.

In painting, the necessity for scientific knowledge, empirical if not rational, is still more conspicuous. In what consists the grotesqueness of Chinese pictures, unless in their utter disregard of the laws of appearances—in their absurd linear perspective, and their want of aerial perspective? In what are the drawings of a child so faulty, if not in a similar absence of truth—an absence arising, in great part, from ignorance of the way in which the aspects of things vary with the conditions? Do but remember the books and lectures by which students are instructed; or consider the criticisms of Ruskin; or look at the doings of the Pre-Raphaelites; and you will see that progress in painting implies increasing knowledge of how effects in Nature are produced. The most diligent observation, if not aided by science, fails to preserve from error. Every painter will indorse the assertion that unless it is known what appearances must exist under given circumstances, they often will not be perceived; and to know what appearances must

exist, is, in so far, to understand the science of appearances. From want of science Mr. J. Lewis, careful painter as he is, casts the shadows of a lattice-window in sharply-defined lines upon an opposite wall; which he would not have done, had he been familiar with the phenomena of penumbra. From want of science, Mr. Rosetti, catching sight of a peculiar iridescence displayed by certain hairy surfaces under particular lights (an iridescence caused by the diffraction of light in passing the hairs), commits the error of showing this iridescence on surfaces and in positions where it could not occur.

To say that music, too, has need of scientific aid will seem still more surprising. Yet it is demonstrable that music is but an idealization of the natural language of emotion; and that consequently, music must be good or bad according as it conforms to the laws of this natural language. The various inflections of voice which accompany feelings of different kinds and intensities, have been shown to be the germs out of which music is developed. It has been further shown, that these inflections and cadences are not accidental or arbitrary; but that they are determined by certain general principles of vital action; and that their expressiveness depends on this. Whence it follows that musical phrases and the melodies built of them, can be effective only when they are in harmony with these general principles. It is difficult here properly to illustrate this position. But perhaps it will suffice to instance the swarms of worthless ballads that infest drawing-rooms, as compositions which science would forbid. They sin against science by setting to music ideas that are not emotional enough to prompt musical expression; and they also sin against science by using musical phrases that have no natural relation to the ideas expressed: even where these are emotional. They are bad because they are untrue. And to say they are untrue, is to say they are unscientific.

Even in poetry the same thing holds. Like music, poetry has its root in those natural modes of expression which accompany deep feeling. Its rhythm, its strong and numerous metaphors, its hyperboles, its violent inversions, are simply exaggerations of the traits of excited speech. To be

good, therefore, poetry must pay respect to those laws of nervous action which excited speech obeys. In intensifying and combining the traits of excited speech, it must have due regard to proportion—must not use its appliances without restriction; but, where the ideas are least emotional, must use the forms of poetical expression sparingly; must use them more freely as the emotion rises; and must carry them all to their greatest extent only where the emotion reaches a climax. The entire contravention of these principles results in bombast or doggerel. The insufficient respect for them is seen in didactic poetry. And it is because they are rarely fully obeyed, that we have so much poetry that is in-artistic.

Not only is it that the artist, of whatever kind, cannot produce a truthful work without he understands the laws of the phenomena he represents; but it is that he must also understand how the minds of spectators or listeners will be affected by the several peculiarities of his work—a question in psychology. What impression any given art-product generates, manifestly depends upon the mental natures of those to whom it is presented; and as all mental natures have certain general principles in common, there must result certain corresponding general principles on which alone art-products can be successfully framed. These general principles cannot be fully understood and applied, unless the artist sees how they follow from the laws of mind. To ask whether the composition of a picture is good, is really to ask how the perceptions and feelings of observers will be affected by it. To ask whether a drama is well constructed, is to ask whether its situations are so arranged as duly to consult the power of attention of an audience, and duly to avoid over-taxing any one class of feelings. Equally in arranging the leading divisions of a poem or fiction, and in combining the words of a single sentence, the goodness of the effect depends upon the skill with which the mental energies and susceptibilities of the reader are economized. Every artist, in the course of his education and after-life, accumulates a stock of maxims by which his practice is regulated. Trace such maxims to their roots, and you find they inevitably lead you down to psychological principles.

And only when the artist rationally understands these psychological principles and their various corollaries, can he work in harmony with them.

We do not for a moment believe that science will make an artist. While we contend that the leading laws both of objective and subjective phenomena must be understood by him, we by no means contend that knowledge of such laws will serve in place of natural perception. Not only the poet, but also the artist of every type, is born, not made. What we assert is, that innate faculty alone will not suffice; but must have the aid of organized knowledge. Intuition will do much, but it will not do all. Only when Genius is married to Science can the highest results be produced.

As we have above asserted, Science is necessary not only for the most successful production, but also for the full appreciation of the fine arts. In what consists the greater ability of a man than of a child to perceive the beauties of a picture; unless it is in his more extended knowledge of those truths in nature or life which the picture renders? How happens the cultivated gentleman to enjoy a fine poem so much more than a boor does; if it is not because his wider acquaintance with objects and actions enables him to see in the poem much that the boor cannot see? And if, as is here so obvious, there must be some familiarity with the things represented, before the representation can be appreciated; then the representation can be completely appreciated, only in proportion as the things represented are completely understood. The fact is, that every additional truth which a work of art expresses, gives an additional pleasure to the percipient mind—a pleasure that is missed by those ignorant of this truth. The more realities an artist indicates in any given amount of work, the more faculties does he appeal to; the more numerous associated ideas does he suggest; the more gratification does he afford. But to receive this gratification the spectator, listener, or reader, must know the realities which the artist has indicated; and to know these realities is to know so much science.

And now let us not overlook the further great fact, that not only does science underlie sculpture, painting, music, poetry, but that science is itself poetic. The current opin-

ion that science and poetry are opposed is a delusion. It is doubtless true that as states of consciousness, cognition and emotion tend to exclude each other. And it is doubtless also true that an extreme activity of the reflective powers tends to deaden the feelings; while an extreme activity of the feelings tends to deaden the reflective powers: in which sense, indeed, all orders of activity are antagonistic to each other. But it is not true that the facts of science are unpoetical; or that the cultivation of science is necessarily unfriendly to the exercise of imagination or the love of the beautiful. On the contrary, science opens up realms of poetry where to the unscientific all is a blank. Those engaged in scientific researches constantly show us that they realize not less vividly, but more vividly, than others, the poetry of their subjects. Whoever will dip into Hugh Miller's works on geology, or read Mr. Lewes's "*Seaside Studies*," will perceive that science excites poetry rather than extinguishes it. And whoever will contemplate the life of Goethe will see that the poet and the man of science can coëxist in equal activity. Is it not, indeed, an absurd and almost a sacrilegious belief that the more a man studies Nature the less he reveres it? Think you that a drop of water, which to the vulgar eye is but a drop of water, loses anything in the eye of the physicist who knows that its elements are held together by a force which, if suddenly liberated, would produce a flash of lightning? Think you that what is carelessly looked upon by the uninitiated as a mere snow-flake, does not suggest higher associations to one who has seen through a microscope the wondrously varied and elegant forms of snow-crystals? Think you that the rounded rock marked with parallel scratches calls up as much poetry in an ignorant mind as in the mind of a geologist, who knows that over this rock a glacier slid a million years ago? The truth is, that those who never entered upon scientific pursuits know not a tithe of the poetry by which they are surrounded. Whoever has not in his youth collected plants and insects, knows not half the halo of interest which lanes and hedge-rows can assume. Whoever has not sought for fossils, has little idea of the poetical associations that surround the places where imbedded treasures were found.

Whoever at the seaside has not had a microscope and aquarium, has yet to learn what the highest pleasures of the seaside are. Sad, indeed, is it to see how many occupy themselves with trivialities, and are indifferent to the grandest phenomena—care not to understand the architecture of the Heavens, but are deeply interested in some contemptible controversy about the intrigues of Mary Queen of Scots!—are learnedly critical over a Greek ode, and pass by without a glance that grand epic written by the finger of God upon the strata of the Earth!

We find, then, that even for this remaining division of human activities, scientific culture is the proper preparation. We find that æsthetics in general are necessarily based upon scientific principles; and can be pursued with complete success only through an acquaintance with these principles. We find that for the criticism and due appreciation of works of art, a knowledge of the constitution of things, or in other words, a knowledge of science, is requisite. And we not only find that science is the handmaid to all forms of art and poetry, but that, rightly regarded, science is itself poetic.—*Herbert Spencer.*

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### THE WORD "US."

AN Athenian once said to a Hebrew lad, "Here, my boy, is some money; bring *us* some figs and grapes." The boy went and purchased the fruit, and giving half of it to the stranger, kept the other half for himself. "Is it customary here, for a messenger to take half of what he fetches?" said the Athenian, rather surprised. "No," answered the boy; "but our custom is to speak what we mean, and to do as we are desired." "But," rejoined the stranger, "I did not desire thee to take half the fruit." "Oh!" replied the boy shrewdly, "what else couldst thou mean by saying *bring Us*? Does not that word include the *Hearer* as well as the *Speaker*?" The Athenian smiled, and was contented.—*Medrash Echoh.*



*OBJECT-TEACHING.*

THE game of memory, as practiced by the Ojibways and Northern Indians, has been found profitable in schools, both for recreation and improvement, as a branch of object-teaching. The Indian chief or teacher, in his rude way, has from twenty to fifty or more sticks, cut, made sharp or pointed at the larger end, and split at the top an inch or two. These sticks are then planted around in a circle, a short distance from each other; then various specimens of different substances (a single specimen on each stick at the top) are distributed around the circle in order; beginning on the right hand of the teacher, and proceeding around in the order of numbers, one, two, three, etc. The Indians, or class, are then allowed to go around the circle slowly and take a strict and scrutinizing look at each specimen in the order of the numbers, one, two, three, and thus around the circle. This is done silently. The sticks, or specimens, are then removed and placed by the teacher, and then the class, on going around the second time, each one in order, is to tell the teacher, as far as possible, without mistake, what specimen is contained in stick number one, two, three, four, five, and so around the whole circle, if possible.

With the Indians, the first specimen will probably be birch bark to make canoes, the second a little tobacco, the third the fur of a beaver, the fourth a bit of calico, the fifth a feather of a particular bird, the sixth the bone of some sort of fish, and so on, different substances in the different sticks planted around the circle. The one who can repeat without mistake up to the highest number receives the premium of reward. The consequence is, the perceptive faculties are called into exercise, and each individual will soon learn to discriminate so sharply that they will be able to track a wolf over dry leaves in the forest as well as the white man can track the same animal in the snow. You will ask, how can they do it? I reply that they do it very readily by observation and sharp inspection, by first noticing a leaf with holes in it, the middle hole, or holes, a trifle larger and in advance of the other hole, or holes, near the central holes.

These two holes they know, by observation, were made by the toe of the wolf, and they immediately stick down a leaf by the first leaf thus marked, and search for a second, and third, and fourth, and so on, putting a stick at each leaf thus marked. By these sticks in a row they find the course the wolf was traveling, and follow on till they find where the animal drank at a spring, perhaps, and they soon discover his den among the rocks or caves near by. By this mode of sharp inspection they become acquainted with the habits of all the wild animals, and also gain a knowledge of the different plants and trees, and turn their knowledge to good account for their individual welfare. The writer has known a scholar, by practicing this exercise, who was enabled to memorize a long lesson for a Bible class, and at the recitation, without the book, repeat it backwards as well as forward, or give any particular verse called for; and he trusts that it may be made available in our common schools as a recreative and popular branch of object-teaching.—*Exchange.*



### THE VERB "TO BREAK."

"I BEGIN to understand your language better," said my French friend, Mr. Arcourt, to me: "but your verbs trouble me still, you mix them so with your prepositions. "I am sorry you find them troublesome," was all I could say. "I saw our friend Mrs. James just now," continued he. "She says she intends to break *down* housekeeping. Am I right there?" "Break *up* housekeeping, she must have said." "O, yes, I remember. Break *up* housekeeping." "Why does she do that?" I asked. "Because her health is so broken into." "Broken *down*, you should say." "Broken *down*, O, yes. And indeed since the small-pox has broken up in your city—" "Broken *out*." "She thinks she will leave it for a few weeks." "Indeed! And will she close her house?" "No; she is afraid it will be broken—broken— How do I say that?" "Broken *into*." "Certainly; it is what I meant to say." "Is her son to be married soon?" "No; that engagement is broken—

broken—" "Broken *off*." "Ah!" I had not heard that. She is very sorry about it. Her son only broke the news down to her last week. Am I right? I am so anxious to speak the English well." "He merely *broke* the news; no preposition this time." "It is hard to understand. That young man, her son, is a fine fellow; a breaker, I think." "A *broker*, and a very fine fellow. Good day." "So much," thought I, "for the verb 'to break.'"

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*PROFESSOR MULLER ON CIRCLES.*

PROFESSOR MULLER, in a course of lectures in Berlin, offered a simple and mechanical explanation of the universal admiration bestowed on circles. The eye is moved in its socket by six muscles, of which four are respectively employed to raise, depress, turn to the right, and to the left. The other two have an action contrary to one another, and roll the eye on its axis, or from the outside downward, and inside upward. When, therefore, an object is presented for inspection, the first act is that of circumvision, or going round the boundary lines, so as to bring consecutively every individual portion of the circumference upon the most delicate and sensitive portion of the retina. Now, if figures bounded by straight lines be presented for inspection, it is obvious that but two of these muscles can be called into action; and it is equally evident that in curves of a circle or eclipse all must alternately be brought into action. The effect then is, that if two only be employed, as in rectilinear figures, those two have an undue share of labor; and by repeating the experiment frequently, as we do in childhood, the notion of tedium is instilled, a distaste for straight lines is gradually formed, and we are led to prefer those curves which supply a more general and equable share of work to the muscles.

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THE schoolmaster who, more than forty years ago, gave instruction to the present primate of the Church of England, Tate, and the Roman Catholic archbishop, Manning, is still living.

## CURRENT PUBLICATIONS.

WE suppose there is no man of generous literary culture, and no seeker after such culture, who would not set great store by a thorough knowledge of the Greek tongue, even if time had preserved to us nothing else from that magnificent literature which it has embodied, than the Dialogues of Plato. It were pay enough for much weary work—it would even be an education in itself, to grasp all the subtle thoughts and follow all the intricate questionings of this prince of philosophers. But few, even among Greek scholars, so far as we are aware, read the original of Plato with ease and instant apprehension of his meaning. That wonderful style of his—neither prose nor poetry, yet the adequate and consummate expression of his loftiest thought and delicatest distinctions—is to us barbarians a sort of obstacle sometimes, darkening the thought that to the cultivated Athenian must for the most part have been as clear as the day; as clear, perhaps we ought rather to say, as the nature of the thought would permit it to be. The greater part of those moderns who have had occasion to investigate the Platonic doctrines at first hand, have yet, we imagine, called Schleiermacher, or Cousin, or Taylor, or some other translator to their aid. The version most often handled of late, is that in Bohn's Classical Library. This was the work of three different hands, and gives proof in the various volumes of their different degrees of skill. Some of the dialogues are rendered fairly well and may be read with some satisfaction: but in not a few it is plain that Plato has been "translated" by one who, whatever his knowledge of Greek, certainly lacked the English for his difficult task. Not seldom the version becomes intelligible only upon reading the original from which it has been "overset."

In Prof. Jowett's translations, (1) however, we see at once the hand of a master of English style. We might be pretty sure that the Regius Professor of Greek at Oxford would

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(1) THE DIALOGUES OF PLATO translated into English, with Analyses and Introductions. By R. Jowett, M.A., Master of Balliol College, Regius Professor of Greek in the University of Oxford. four volumes. New York: Scribner, Armstrong & Co.

not often miss the meaning of his original where the text is not hopelessly corrupt ; but a thorough knowledge of a foreign tongue is only half of the translator's equipment. An easy, flexile, yet sinewy English will alone suffice as a vehicle of the subtle, wide-reaching, profound thoughts of the all-questioning Greek. The greatest copiousness of synonyms and the subtlest discrimination in the use of them will be required in every dialogue. All possible resources of rhythm and arrangement will be found to fall short of the music and the art of Plato's periods. The supreme difficulty will be, not to understand Plato's language, but to render him fully intelligible to others under the limitations of Saxon speech. This difficulty we believe Prof. Jowett to have most successfully surmounted. In his version the dialogues are certainly most delightful reading. The conversation runs on and on, as smoothly for the most part as if it were an original composition. The *Apology*, the *Phædo*, or the *Republic* can be thoroughly enjoyed in the present version. The same is true of the last named, Plato's greatest work, in the admirable rendering of Davies and Vaughan ; but a comparison of the two shows that Jowett is not seldom the more vivacious and forcible.

A very valuable feature of this edition of Plato is the extended introductions prefixed to the separate dialogues. These go over the whole ground of the discussion, and are meant to supersede all necessity of special notes. They indicate the relation of each dialogue to the rest so far as discernible ; and set forth the method and underlying idea of the Platonic system, if the name system may be given to such tentative speculations. It is the distinguishing excellence of these preliminary essays, that, instead of estimating Plato's theories and principles in the light of modern science and philosophy, they illustrate them from the prevalent thinking of his own and preceding times. In other words, it is Prof. Jowett's endeavor to take us back to Plato's day and surroundings, rather than bring the Attic thinker down into the midst of our scientific and practical nineteenth century. A moment's thought will show this to be the only proper way of procedure. The opposite course would be as unjust as unhistoric. For ourselves, we choose to study

Plato under Jowett's tutorship rather than Grote's; for we believe that the former occupies the truer point of view.

It only remains to be said of these volumes, that they are well printed on tinted paper, and can be had for just one-half the cost of the English edition.

THE numerous classical teachers of New England, who received their college "fit" at the hands of "Uncle Sam," will know exactly what to look for in the new edition of Kuehner's Grammar.<sup>(2)</sup> They know beforehand that it is accurate, practical and entirely sufficient for the preparatory course. In addition to the revision which the work has undergone, we note with approval the fact that the exercises have been set by themselves at the end of the syntax and a catalogue of Principal Verbs added. Valuable as the modern classification of Greek irregular verbs may be, we should hesitate a long while before adopting an elementary grammar which should lack an alphabetical list of them. This want, as we have said, is here supplied.

A NEW Chemistry<sup>(3)</sup> commends itself by the way in which it unites the practical with the scientific. It conducts the student to the principles and laws of Chemistry by the true path of observation and experiment. We like specially the series of 228 Experiments detailed in connection with the several elements, the careful directions in the appendix for Chemical Manipulation, and the Order-lists of Chemicals and Utensils. The private student may go at work with no other aid than the manual gives him, furnish his laboratory at a trifling cost, and work out for himself the main facts and laws of inorganic chemistry. This little work is something more than an abridgment of the larger, as it gives, under the head of Carbon, some seventy pages upon organic compounds. We trust the time may soon come when the pupils in our high schools and academies may learn chemistry, instead of learning *about* it. Such a book as this will set them on the right track.

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(2) AN ELEMENTARY GRAMMAR of the Greek Language, with Exercises and Vocabularies. By Samuel H. Taylor, LL. D. New York: Ivison, Blakeman, Taylor & Co.

(3) AN ELEMENTARY MANUAL of Chemistry, abridged from Eliot and Storer's Manual, by William Ripley Nichols. New York: Ivison, Blakeman, Taylor & Co.

THE New York *Evening Mail* says:—"A. S. Barnes & Co. publish a collection made by Charles Northend, A. M., of "pieces" in prose and poetry, designed for the use of pupils in intermediate schools. There are a few good selections, many 'goody' ones, and an abundance of trash. The pupil must be very 'intermediate' indeed who could stomach such weak water gruel, and the teacher very incompetent who could offer no better food for growing minds from the resources of English literature."

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MISCELLANEA.

THE *New York Herald's* Washington correspondent, in discussing Japanese matters, says:—"On account of these complications Mr. Birdseye G. Northrop, the Connecticut State Commissioner of Education, declines the similar position tendered him some time ago by the Japanese government."

THE N. Y. *Evening Post* says: "Mr. Mori denies having officially engaged Mr. Northrop to found a system of education in Japan."

Doubtless Mr. Northrop can explain.

MR. O. H. KILE, Principal of the public schools in West-erly, has been invited to accept the Principalship of the Kansas State Normal School at Leavenworth. Salary, \$2,500.

It is announced that Professor Blyden, who is an accomplished Arabic scholar, and an African at that, has discovered a well-appointed Mohammedan university in the interior of Africa, about eighty miles from Freetown, in which one thousand persons of both sexes are receiving an education. The Arabic Bible, published in this country, is used as a text-book, and a number of dusky women are diligently studying the Arabic language.

FOUR of the Japanese students at Williston Seminary board with Landlord Hill. Each wished a separate room,

but were told he should have to put two in a room, unless one was sick. The boys are bright, and soon took their cue, and Mr. Hill received the following note, which is verbatim et literatim, et punctuatim :—

DEAR MR. HILL: Mr. Seye has a sick, & he cannot lay down to-gether Mr. Ouseke in the same bed, therefore he want a other bed. May he get it?

SQUIRE—"Hobson, they tell me you've taken your boy away from the National School. What's that for?" Villager—" 'Cause the master ain't fit to teach un!" Squire—"Oh, I've heard he's a very good master." Villager—"Well, all I knows is, he wanted to teach my boy to spell 'taters' with a 'P'!"—*Punch*.

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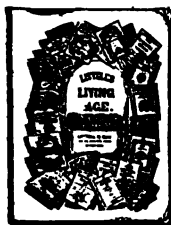
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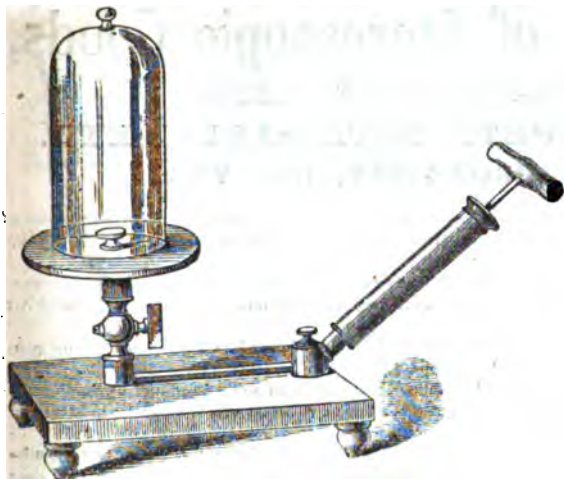
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*A Magazine of*

Popular Instruction and Literature.

December, 1872.

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# AMERICAN EDUCATIONAL MONTHLY.

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DECEMBER, 1872.

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## *THE INJURIOUS INFLUENCES OF THE SCHOOLS.*

### PART II.

#### CONGESTIONS OF BLOOD TO THE HEAD.

**I**N the preceding section, it has been said that the leaning-over position of the head calls forth congestions. This is explained in the following manner :

Through the bending of the neck, those blood-vessels of the latter which should bring back the blood from the head to the breast, are compressed. Close fitting articles of clothing favor in a high degree such pressure; other circumstances have a similar effect. With a bowed-over position of the head there occurs, naturally, a proportionate bending of the chest, the more so, the lower is the plate of the desk. The result of this is a certain pressing together of the stomach, and this again on its part results in a hindering of the activity of the diaphragm, the most powerful of the muscles of inspiration. Imperfect inspiration prevents the reflux of the blood from the veins of the neck to the breast, whither it should return.

To this must be added the fact, that, with strained attention, inspiration is performed more imperfectly, the more so the less the need for respiration is incited by talking. The necessity felt after a certain time for inhaling a deep breath,

after long, temperate, and especially quiet straining of the mind, is thus explained, and in the case of weak or tired persons, the inclination to yawn appears as the natural form of the deepest inspiration. All these circumstances favor the so-called passive or mechanical congestion, in so far as they prevent the reflux of the blood in the veins.

There is, however, in the schools, a very effective cause for the so-called *active* congestions to the head, that is, for the increased flow of blood through the arteries, and that is, the strained activity of the brain. From the relation of the brain to the nerve centers, this organ can produce not only an increased activity of the heart, but a widening of the arteries, which is made evident by an increased flow of blood to the head. Reddening of the face, ears, and eyes, are the immediate signs of this, although it is known that in the case of higher excitement, the opposite, paleness of countenance sometimes occurs, caused by the prolonged contraction and narrowing of the blood-vessels. This external paleness, which is not seldom connected with a strong reddening of the ears, by no means proves a similar paleness of the brain. The latter can indeed be very full of blood, while the cheeks are blanched.

Among the various evils which result from these in part passive and in part active congestions, three have given, of late years, the opportunity for statistical inquiries. Drs. Guillaume and Becker report the following:—

I. HEADACHE.—Guillaume, who designates this disease as *Cephalægia scolære*, found among 731 scholars of the "College Municipal" in Neufchatel, 296, or over forty per cent., who suffered frequently from headache (*Hygiène scolære*. Genève, 1864, pp. 33, 77.) Girls were found to be more liable to it than boys. Among the latter were only twenty-eight per cent. The younger pupils, especially among the boys, suffered to a very great degree. Becker (*Luft und Bewegung zur Gesundheitspflege in den Schulen*. Frankfort-on-the-Main, 1867, p. 12,) examined 3,564 scholars, boys and girls, of all the public schools of Darmstadt and Bessungen, as well as three private schools at Darmstadt. He found 974, or 27.3 per cent. suffering, more or less, from headache. The

special tables are, unfortunately, imperfectly communicated, only the percentage and not the real figures, being given. The result of the examination, however, appears to be, that in the city schools, in regard to the boys, the lower classes contain the greater number of sufferers; while in the higher schools (gymnasias, higher girls' schools) it is just the upper classes that furnish a very strong contingent. In the first class of the gymnasium, 80.8 per cent. complained of headache. Becker concludes from his figures (which do not exactly agree) that the number of sufferers is least in the first-school years, and increases with the length of school visitation, the greater number of hours of study, and the intellectual strain required. As another agency, he mentions the school rooms of too small dimensions.

It must nevertheless be mentioned that another circumstance can come into account. Deville and Troost (*Compt. rend. des séances de l'acad. des sciences*. 1868, 13 January,) found in the air of school rooms, various gases, especially carbonic oxide, generated by red, glowing, iron stoves, a circumstance which is not rarely met with in schools. Headaches, dizziness, tremblings, and similar attacks are also the consequence of the slighter effects of that so poisonous gas. Dr. Oidtmann (*Der Kohlendunst in seiner giftigen Wirkung auf den menschlichen Körper*, Linnich, 1868, p. 62.) has no hesitation in asserting that chronic poisoning of school children through carbonic oxide, in his own district, where iron stoves are very common, is relatively of very frequent occurrence.

II. BLEEDING OF THE NOSE.—Guillaume found bleeding of the nose frequently occurring; with 155 pupils—twenty-one per cent.! He found the evil more general with boys (twenty-two per cent.) than with girls (twenty per cent.) Among the boys a very decided decrease was shown in the upper classes; among the girls this decrease was less regular. Becker found on the whole only 405, or eleven and three-tenths per cent. afflicted with bleeding of the nose. Exact figures are not given, though he says that the bleeding was most frequent in the upper classes of the gymnasium, the higher girls' school, and one private school; in

those schools, as he says, whose pupils sit longest in the school room, and have the least exercise in the open air.

III. GOITRE.—Guillaume, who, as far as my knowledge reaches, was the first to refer to this disease, designates it as *school-goitre*, (*goitre-scolaire*,) and says it was known among the scholars themselves by the name of "thick neck," (*gras cou*.) He found 414 cases, or fifty-six per cent.; 169, or forty-eight per cent. among the boys, and 245, or sixty-four per cent. among the girls. According to this author, goitre frequently disappears during the holidays, becoming chronic at a later period, but showing itself as early as the eighth year among school girls, after a single year's visitation of the school. In regard to this disease, the statements of Guillaume stand as yet isolated, and it is questionable, therefore, if they may lay claim to a general validity. Nevertheless, it is certain that the feminine sex and the age of youth in general, are especially predisposed to goitre; and that through distention of the glandular vessels the basis for this evil can be produced. (See, for more extended information on this point, Virchow's *Onkologie*, Vol. III, pp. 21, 52, 76.) This point deserves a more minute medical research, because the evil in question, having a certain duration, the diseased organ can be examined closely, and positive results might be expected.

Headache and bleeding of the nose, on the other hand, are evils sufficiently known to physicians and parents as frequent concomitants to school visitation. Here, too, the experiences cited by no means lead us to a safe conclusion. It is rather to be urged that, in future, teachers should keep, under medical supervision, lists of cases of these evils occurring, and the data thus won should be compared with the conditions of the school room, of the individual classes, the time devoted to instruction, the seasons of the year, the character of the stoves, and the ventilation. Nevertheless, it can hardly be admitted, even with our present knowledge, that the schools favor such abnormal phenomena to a very great extent, and it is probable that, in many cases, the schools are the first to call them out; and their frequent appearance must be made the subject of earnest reflection.

At this point we would speak concerning the influences of congestive conditions upon the intellectual capacities of the scholar. It cannot be doubted that such conditions are frequently connected with distraction of the mind and incapacity for thought and intellectual labor: and that, when they become permanent, dangerous symptoms of the brain are thereby developed. Certain physicians have tried to make the schools responsible for the appearance of epilepsy, St. Vitus' dance, and other diseases of the mind, manifesting themselves at a later period. F. Heyer *Ueber die allzu grosse Anstrengung der körperlichen und geistigen Kräfte im Kindes- und Jünglingsalter*, Berlin, 1864,) sharply emphasizes this point. But the connection of the facts is here very loose. In order to gain a scientific basis, we need thorough preliminary examinations, and it must here suffice merely to indicate in a general way the presence of a danger, which in individual cases first of all comes to prominence, when special lacks or bases prevent a positive point of attack to the working causes. According to the points of view adopted by the researcher, now this lack or basis, now that momentary cause, would gain a greater importance; and it is very plain that just here the method of instruction, the especial influence and treatment on the part of the teacher, comes very essentially into consideration.

IV. CURVATURES OF THE SPINE.—Not a few medical men who have engaged in special studies upon the question of diseases of the school, hold firmly to the opinion that a great portion of the charge of producing curvatures of the spine must be laid to the school. Especially is the lateral curvature, and indeed, here again, chiefly the habitual form, laid to its charge. Fahrner *Das Kind und der Schultisch*, Zurich, 1865, p. 6,) says: "If nearly ninety per cent. of these curvatures begin during the school-age, and the curvature corresponds exactly with the position taken in writing, we have certainly the right to complain that the school is the principal cause of this evil." Guillaume makes a comparison of the usual form of lateral curvature, with the position taken in writing by a correct illustration, and he says, that among 731 pupils, he found 218, therefore nearly thirty per cent., who exhibited deviations of the spine.

That the majority of cases of lateral curvature arise during the school years, is a view unanimously adopted by all orthopedists. Klopsch (*Orthopädische Studien und Erfahrungen*, Breslau, 1861, p. 22,) embraces the experiences of medical specialists in saying, that the majority of cases arise between the tenth and fourteenth years. Eulenburg alone assumes an earlier period. He formerly placed it between the seventh and twelfth years, but later between the sixth and tenth. At any rate, all agree in placing the origin of the disease in the period of the school-age. It can be confidently asserted, that the ordinary lateral curvature of the spine is a *development-disease of the school-age*.

It is less certain whether the school, as such, is the principal cause of this disease. On the one hand we here lack comparisons with countries where school visitation is not obligatory. The testimony of the primary school committee of New York, which Guillaume gives, has a certain value, although it is not conclusive. On the other hand, a comparison of many schools would be here necessary: the discrepancies between Eulenburg and other orthopedists would then possibly be explained.

An especial consideration against accusing the schools of producing this disease might arise from the fact that lateral curvature preponderates among females. Guillaume counted among 350 boys 62 cases, or eighteen per cent. of scoliotic (with lateral curvature), and among 381 girls 156 cases, or forty-one per cent.! But many slight cases are here included, which, from a pathological stand-point, do not come into consideration. The experiences of orthopedists relating to very severe cases are much more striking. Klopsch calculates that from eighty-four to eighty-nine per cent. of all cases of lateral curvature fall upon the female sex. Adams (*Lectures on the Pathology and Treatment of Lateral and other Forms of Curvature of the Spine*, London, 1865, p. 149,) has calculated that of 173 cases, 151 were feminine, and only 22 masculine; Knorr (*Erster Bericht der gymn. orthop. und elektrischen Heilanstalt in München*, 1860, p. 23,) in 72 cases, 60 feminine.

According to these figures, it cannot be doubted that the school is not the only cause of lateral curvature; indeed, it

must be also acknowledged that it is not the principal cause, for experience has proved, although we have not the figures here, that lateral curvature appears very frequently among girls who do not visit the school at all. Orthopedists have often referred to other kinds of employment, especially feminine hand-work, as a weighty cause of curvature. If this be correct, then the home and the family sin just as much as the school, and in many cases more. Nevertheless, the latter cannot be declared innocent; otherwise the same argument could be reversed, and applied to short-sightedness, which appears excessively frequent among boys. If then, from the facts previously adduced, it is proved that the study of books injures mostly the eyes of the boys, and the feminine hand-work more the back and chest of the girls, there arises a very distinct duty for the schools, which should also give an example for employment at home.

Some Orthopedists, as Bouvier, (*Leçons cliniques sur les maladies chroniques de l'appareil locomoteur*, Paris, 1858, p. 427,) refuses to charge hardly any influence to the employment and the posture, in the production of lateral curvature; but we have positive experience which necessarily compels us to such an assumption; and that is, the very preponderating appearance of the rectilinear division of the spine. We will adduce a few figures. Adams, for instance, found among 742 cases of simple curvature, 619 in which the convexity of the spine was to the right. This is just the posture described by Guillaume, which applies naturally to drawing, feminine hand-work, etc. Such a coincidence cannot possibly be accidental. Nor can the usual curvature be traced to a specially diseased condition. Parow reports, in a lecture on the necessity for improvement in the form of the school-desk, that he had observed among 282 cases of curvature, 218, or about seventy-nine per cent. in which there was no special external or internal diseased condition that could be referred to as the cause of this evil. The origin must be alone attributed to an incorrect position of the body, which had become a habit.

It does not indeed follow that the curvature of the spine is a mere muscular effect, as many orthopedists have assumed; it is certain that the bones of the spine are subject to

positive changes, which assume more and more permanent form. These changes appear *during growth*, at a period when the spine itself is in its development. They give abnormal forms of the vertebræ; alter their relative positions; are transmitted also to the bones of the chest and the pelvis and even to the face, (Stern in *Müller's Archiv*, 1834, p. 238,) and thereby have certain effects upon the organs inclosed in those parts. In this relation it may suffice to call to mind, that, according to the spirometrical measurements of Schildbach, *Beobachtungen und Betrachtungen über die Skoliose*, Amsterdam, 1862, p. 7,) among children from thirteen to fifteen years of age, afflicted with curvature, the capacity for inhalation had decreased a third, and, in some cases, one-half; in other words, that the respiration which is the first necessity to a healthy life, is injured to the very greatest degree.

As regards the minute developments of the process of curvature great diversity of opinion exists among physicans. While Klopsch considers, as the primal point of exit for the disturbance, the bones of the pelvis, the disproportionate formation of which first produces the deviation in the lower part of the spine; Hüter, (*Die Formentwicklung am Skelet des menschlichen Thorax*. Leipzig, 1865, p. 87,) exactly to the contrary, regards lateral curvature to be the asymmetrical development of the halves of the chest. But this diversity of opinion, which probably proceeds from a too great generalization of correct observations, does not exclude the possibility, that in either case an improper posture and one-sided activity of the muscles is the primary cause, which produces one-sided pressure upon the growing parts, and thereby retards the growth of the bones and one side of the body.

In the cases reported by Klopsch, imperfect growth of the bones around the back cartilaginous seam of the pelvis (Synchondrosis sacro-iliaca) is first of all treated. The fact is, however, that the body when seated in the position taken for writing rests very frequently and for a length of time upon the left hip; and it is very natural that the left capulary seam should also be pressed together to a greater extent. Probably we should here bring to mind still another



circumstance, which the experienced orthopedist, Schildbach, has adduced for another end (*Virchow's Archiv*, 1867.) He calls attention to the fact, that girls frequently sit in such a manner that their clothes are all pressed together under one hip. "The benches in the school are generally placed in such a position that the window is found at the left side, and on the right is the doorway. The girls, therefore, proceed to their places with the left side first, between the benches and the desk, and when they come to sit down, under the left half of the seat they have the clothes smoothly folded under them, while under the right half, these are doubly, and trebly folded, making a difference of from one to two inches in height."

If, on the other hand, we have to consider as Hüter has correctly adduced, for the majority of cases, a primary misformation of the one-half of the chest, we must then again return to the pressure which falls upon one side of the bodies of the vertebræ to an excessive degree. This pressure, however, is induced through a lateral curvature, which must first of all be referred to muscular activity. What now is the reason that the curvature of the pectoral spine is generally to the right? At the close of a very conscientious research, Hermann Mayer says in *Virchow's Archiv*, 1866, vol. XXXV, p. 251: "We find the cause in the carriage, which arises from the endeavor to place the right shoulder as high as possible—an effort which is called forth by the use of high desks, lathes, etc.; further, in the attitude produced by the inclination of the head to the left side, in order to look upon the course of the pen; in short, in various oblique positions, frequently repeated, and arising from various causes. Meanwhile, the muscles must not, therefore, be accused of developing lateral curvatures, for the muscles producing such carriage do not immediately bring on the attitudes and changes of the form by direct action, they merely give through the act once performed, the faulty attitude, and this acts onward in conjunction with the statical momenta."

In a more recent essay, which treats especially the question of the school desks, Mayer declares very positively (in *Virchow's Archiv*, 1867, vol. XXXVIII,) that high desks,\*

which are at too great a distance from the scholar, favor the development of lateral curvature, and he recommends a change of the forms of the benches and desks. Prince (*Orthopedics*, Philadelphia, 1866, p. 100,) calls attention to the fact, how much compulsory quiet and sitting still contributes in growing children towards commencing and confirming improper postures, a remark which certainly deserves to be noticed by teachers in girls' schools.

From a consideration of the evils already discussed, there arises, at all events, for the school a very well defined duty. On the one hand, scholars, and especially girls, must be seated in a judicious manner, and be carefully overlooked as to their carriage and posture, and, on the other hand, they must be given opportunities, by proper gymnastic exercises, of bringing their limbs again into proper use.

V. DISEASES OF THE ORGANS OF THE CHEST.—Among diseases of the organs contained in the cavity of the chest it has been especially those of the organs of respiration which have been charged as being caused by unsuitable arrangement of the desks and benches in the schools. Among these diseases, again, pulmonary consumption, mostly in connection with scrofula, has been especially named. Lorinser in particular mentions this subject in his aforementioned article: and Carmichael reiterates the charge. The latter relates, among other things, that, in a parochial school which was in a courtyard, and, in which, therefore, the children were compelled to remain the whole of the time, out of twenty-four well nourished and well clothed girls, who showed no traces of disease on first entering the school, seven were found to be scrofulous. Arnott was commissioned with the examination of a boys' school at Norwood, England, among the scholars of which (six hundred in number) scrofula was uncommonly spread, and an excessive mortality prevailed. The evil was generally ascribed to improper and insufficient nourishment. Arnott, nevertheless, found that the food was good, and given in sufficient quantities; but that the ventilation was almost totally neglected. After this latter evil had been remedied, the excess of scrofula quickly disappeared (M'Cormac, *On the Nature, Treatment, and Prevention*

of *Pulmonary Consumption*, London, 1855, p. 480;—Ansell, *A Treatise on Tuberculosis*, London, 1852, p. 445;—Benj. W. Richardson, *The Hygienic Treatment of Pulmonary Consumption*, London, 1857, p. 13). A number of similar examples could be adduced, though here, too, statistical data is wanting. Only indirectly do we win single facts in favor of the correctness of the view that school attendance favors consumption. We possess for Berlin, for example, regular statistical tables, arranged according to age and manner of death (Engel, *Die Sterblichkeit und Lebenserwartung im preuss. Staate und besonders in Berlin*, 1863, p. 96-97), from which, by selecting the deaths of the school-age, we find a rapid increase of the rate of mortality from pulmonary and bronchial consumption in the period including the tenth to the fifteenth years of age, and increasing to a considerable extent in the later period from the fifteenth to the twentieth years. Of one hundred cases of death in the ages from

|            |       |                                  |
|------------|-------|----------------------------------|
| 5-10 years | 4.81  | were from pulmonary consumption. |
| 10-15      | 12.96 | "                                |
| 15-20      | 31.88 | "                                |

To this should be added 8.93, 7.90, and 4.74 per cent. cases of scrofula not included in the above, besides many other closely related categories. This result is certainly very striking, especially when it is considered that, besides the diseases noted, only typhus and cholera cause an approximate high rate of mortality among these ages.

Of course this mortality cannot be ascribed to school visitation alone; many conditions of home life have a positive influence upon it. Nevertheless, the fact is not to be underrated, that the schools contribute a great deal toward it. As especially injurious the following influences are to be specially noted:—

1. Air rendered impure by the stay of so many children in the school rooms.

2. Colds, brought on by the change from the warm schools to the cold air, and the draughts through windows, doors, etc., which induce inflammations of the neck and of the organs of the chest.

3. Dust in the school room.

4. The organs of respiration impaired by continual sitting.

To a very recent date the opinions regarding the cause of pulmonary consumption were unclear and contradictory. This disease was confused with tuberculosis and thereby transferred, without known cause, to the department of hereditary constitutional diseases. More recent researches have taught that, in the designation of pulmonary consumption, a greater number of different processes are included, which sometimes exist simultaneously, or succeed one another; at other times exist singly and independently. Many of them, though by no means all, lead in later stages to ulceration of the lungs. The majority of them begin with simple catarrhic and inflammatory symptoms, which generally owe their origin to external influences, especially to the taking of cold, and the inspiration of irritating materials such as dust, ashes, etc. Their duration is favored by imperfect respiratory movements, causing accumulation and retaining of the secretory matter; and further, through the viscosity and perishableness of this secretory matter, which decomposes and inspissates, and upon whose condition the nature of the air inspired has an influence not less, indeed, even more, than the character of the nourishment; and finally, through the duration or repetition of the irritative influences.

This brief survey will suffice to show how dangerous to health a school with bad arrangements and imperfect oversight can be, and how much reason there is to fear that a portion of the fatal cases of consumption of the school-age may really be attributed to the agency of the school as such; indeed, that even a part of the unfavorable symptoms which appear after the school period is passed, may also be attributed to the school. There is nothing so frequent among school children as coughs and pains of the neck. Vernois, in his report on the hygienic condition of the French lyceums (*Etat hygienique des lycées de l'empire en 1867*, Paris, 1868, p. 20,) places angina and bronchitis at the head of all diseases observed. By the non-attention to these evils in the case of a sickly child, a very dangerous process can result. There is therefore reason enough for earnest care.

## DISEASES OF THE ORGANS OF DIGESTION.

Much as people were inclined earlier, to ascribe constipation of the bowels and the supposed increase and prematurity of the hemorrhoid to the school, this whole department is, nevertheless, insecure. We do not wish it to be here understood that there is no reason for apprehension. But it is, very difficult to win here a safe basis, since the most of these diseases are not fatal, and are therefore exempt from statistical elucidation; and as other injurious influences, especially the nourishment, are so frequently present, the degree of injury which may in these cases be ascribed to the school, as such, is difficult to determine. How much an improper posture in sitting injures the circulation in the stomach is evident; but we cannot tell how great are the permanent injuries resulting therefrom to liver, stomach, spleen, kidneys, etc. Only two departments can be here treated from the stand-point of experience.

The first includes the organs of digestion. We can refer to the fact here that the continuous attendance of school very frequently injures the appetite, so that, after some weeks, or at least after some months, periods of loss of appetite, dyspepsia, and similar complaints make their appearance, with more and more frequency. Irregularity in going to the stool, imperfect preparation of the blood, debility, fatigue, emaciation, and loathing of food are the usual consequences.

Dr. Gast (in his *Aerztliche Vorschläge zur Reform des Volksschulwesens in Sachsen*, Leipzig, 1863, p. 7,) has with justice called special attention to these phenomena; lack of ventilation in the school rooms, lack of proper exercise, intellectual over-exertion are the causes first to be mentioned. The increase of the period of attendance at school, and even the increase of the numbers of hours of instruction in the forenoon in favor of the free afternoon, contribute towards increasing these abnormal conditions.

The second section relates to the sexual organs, which, with both sexes, in the later periods of attendance at the public schools, and still more, in the higher schools, are so much exposed to danger. Apart from the evil influences of

bad example, and leading astray, the long continued sitting, intellectual excitement, and the existence of disturbances of the organs of digestion, easily irritate the sexual organs. The greatest attention should be paid to this subject in girls' schools, where the menstrual period of those growing up into womanhood is a consideration calling for so much care. This point is competently treated of by Gast, in his work above-mentioned, and it may here suffice to refer the reader to it. The necessity of experienced female teachers, or at least feminine oversight, for girls' schools, is too frequently neglected.

#### CONTAGIOUS DISEASES.

Certain contagious diseases, as measles and scarlet fever, are so well-known as preëminently diseases of children, and disseminated by the school, that it suffices here merely to bring them to mind. It is not to be doubted that there are other diseases, such as the small-pox, cholera, whooping-cough, and diphtheria, which find in the school a fresh starting point for increase. Typhus and diarrhœa here come less under consideration, for although cases can be adduced where in consequence of drinking impure water, such diseases appeared epidemical, these are exceptional, and are seen most in boarding schools. The transferral of parasitical plants and animals, (itch, lice, scurf,) may be mentioned here for the sake of completeness. With reference to physical injuries received from the punishments of the teacher, those from the scholars fighting with one another, and also from gymnastics, no statistics exist, but that such injuries do occur from all these causes, is undeniable, and indicate the great necessity for careful superintendence and thought by school teachers.

#### CONCLUSION.

When we survey the facts here given, we see a great want of scientifically confirmed, numerically authenticated, and, consequently, perfectly reliable material. It is possible that more extended information might be obtained from the official reports of the school authorities; perhaps there is some existing in literature not mentioned here. But however much is necessary yet to be won for completion, it is

undoubtedly certain that an exact compendium of school pathology does not exist. Such, however, must necessarily be determined if the school authorities are to go safely to work. Until now it has been attained only in a few places, and indeed we may say only for shortsightedness; and here only through the private labors of single physicians. The public school authorities must, therefore, see that they gain a perfect knowledge of the pathological school diseases. This might in part be attained through the teachers, if it were determined that they should complete the "absence list," by noting the cases of sickness and death, in a book specially designed for the purpose; this, however, is more a preparatory work rather than the labor proper.

The latter can only be performed by physicians; physicians, too, who are well acquainted with school-hygiene and the modern methods of research. It is an indispensable necessity that the public health in the schools, with all necessary appurtenances, be put into the hands of competent physicians. They must first determine the dangers by which the school-age is threatened; from the summing up of their reports they will come to an exact result in regard to the school diseases of the whole country, and the separate provinces. From this may be gained the data for an exact knowledge of the corporeal development of the nation.

Another point, the question of school desks and benches, may also here be touched upon. If desks and benches are to stand in a certain relation to the body of the young, then more extended measurements of the size and proportion of the bodies of the children and young people must be made, than have hitherto been done. It will not suffice to choose here and there a large town. It is necessary to put town and country in a certain contrast, and, above all, to take into account the provincial peculiarities. The same ages in a class in one part of the country show quite a different average size to those of another. Manufacturing districts give far different proportions to the agricultural districts. How great this difference is in the age of childhood is not known, at least so far as figures go, on the basis of which the models for the size and proportion of bench and desk should be taken. That there would be no difficulty in carry-

ing these researches to a greater extent is shown by the example of a number of physicians who have already voluntarily undertaken such tasks. We desire that such examinations should be carried on officially on a fixed method. How weighty the result would be is self-evident.

Only after such preparatory labors will it be possible to discuss further, in a comprehensive manner, in what relation certain diseases stand to certain arrangements and regulations found in the school. In order to draw positive results, a CENTRAL COMMISSION OF SCHOOLMEN AND PHYSICIANS should be formed, which should take in hand the direction of the whole matter. As a matter of course these men would have to discuss these measures and regulations which later would serve as the tenor for the issuing of laws or instructions.

The overwatching and in part carrying out of these measures and regulations must again be conferred upon a Committee in each school district, in which, as permanent member, there should be a sanitary officer, or in the greater districts, several such.

It is not likely that a more precise research will direct attention to new and hitherto unknown injurious influences and causes of disease. Their number can now be pretty correctly determined. They are principally the following:

1. *Air in the school-room*; the condition of which is affected by the size of the room, the number of scholars, heating, ventilation, dampness of the floor and walls, and dust (cleanliness).

2. *Light in the school-room*; affected by the position of the building and the room, the size of the windows and their relation to the desks, the color of the walls and the surroundings, and artificial illumination, (gas, oil, etc.)

3. *Seats in the school-room*; especially the relation of bench and desk, formation of the same, and length of time seated.

4. *Bodily exercises*; especially playing, gymnastics, bathing, and their relation to the time of sitting and purely intellectual work; their arrangement and oversight.

5. *Intellectual exercises*; their duration and change; their amount; the arrangement and duration of the play hours



and holidays; the amount of home and school labor; the commencement of school duties, etc.

6. *Punishment* ; especially corporeal.

7. *Drinking-water*.

8. *Water-closet*.

9. *Means employed in instruction* ; especially the choice of books (size of print), and the objects employed in intuitive instruction.

Of late years reformatory movements have been begun in certain of the German schools, especially in regard to the bench and desk question. And though it must be admitted that this question is of great importance, that short-sightedness, congestions to the head, difficulties of respiration, improper posture of the spinal column must be referred to improper benches and desks, to a degree which is not to be under-estimated, it is, nevertheless, not to be denied, that these articles alone do not bear all the blame. Insufficient light, wrong position of the windows, improper attitudes, too small print of the school books, too small handwriting, have greater or less influence in bringing on and increasing short-sightedness. Bad air, imperfect ventilation, overfilling of the class-rooms, carbonic oxide from the stoves, over-exertion of the brain, produce congestions, even with the best forms of benches and desks. Often enough a number of causes are at work, and their total effect must not be ascribed to any single one.

The sanitary official alone is able to deal with the cases here mentioned. He will be able to give all the necessary information to the school authorities, and to give his propositions for changes. As a matter of course, there are many questions of a purely pedagogic nature. What demands are to be placed upon the ability of the scholar, what exertions can be undergone according to his age, what method of instruction shall be applied, how the hours for gymnastics, play, and the holidays shall be fixed, is first of all a matter belonging to the school-man, but a greater part of these questions will only be properly solved when here, too, the advice of the physician is submitted. In the School Commission an exchange of opinions must be had, school-men and physicians mutually explaining to, and convincing each

other. Only in the working together of those persons perfectly acquainted with the subject will the State and the community win a suitable organization for school oversight which can overwatch the solving of one of the great problems of the times—the physical and intellectual health and development of the coming generation.

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### GEOGRAPHICAL NOTES.

UNITED STATES.—Four American exploring expeditions are now in the field, viz., those of Clarence King (40th parallel) and Lieutenant Wheeler (Nevada and Arizona), under the auspices of the War Department; Professor Hayden (Montana and Idaho), Interior Department; and Major Powell (on the Colorado), Smithsonian Institution. Perhaps the most thoroughly equipped and elaborate exploration is that of Lieut. Wheeler, which has for its object a thorough investigation of the region west of the hundredth meridian, for the purpose of determining its geographical positions, thoroughly working out its topography, and investigating its geology, natural history, and climatology. As the basis of this work, it is proposed by Lieut. Wheeler to divide the region referred to into eighty-five rectangles of equal size, and to mark their corners with great precision, then, taking each one in detail, to determine its astronomical, physical, and natural history features. Eight rectangles have been completed by Lieut. Wheeler in his previous expeditions, and it is expected that thirteen will be finished by the end of the season.

“The work of the present season will be carried on almost simultaneously in Utah, Arizona, and Nevada, several divisions of the main party having already been organized and set to work. The southern and south-western portions of the Salt Lake basin are to be explored; also the mining regions of Eastern Nevada. It is proposed to establish astronomical points, by means of which to determine with greater accuracy the location of the mineral veins. The Wasatch Mountains will constitute the eastern limit of operations during the year. The expedition, as organized, embraces the following among the more important of the *personnel*:—Lieut. George M. Wheeler, United States Engineers, in command; Lieuts. R. L. Hoxie

and W. L. Marshall, U. S. Engineers; Dr. H. C. Yarrow, surgeon and naturalist; T. V. Brown, hospital steward and meteorologist; G. K. Gilbert and E. E. Howell, geologists; J. H. Clark and E. P. Austin, astronomical observers; Louis Nell and John E. Weyss, chief topographers; H. W. Henshaw, assistant naturalists; M. S. Severance, ethnologist; and William Bell, photographer."—*Harper's Weekly*.

—The San Juan boundary dispute, after years of assertion on one side and refusal to yield on the other, has at last been settled in favor of the United States by Emperor William of Germany, who rendered his decision in October. Much smaller differences than this have brought about great wars. The question between England and this country was whether the Haro channel east of Vancouver Island, or the Rosario Strait near the main, was the true water boundary between the two empires. It is now resolved in favor of the outer strait, with the result of establishing our sovereignty over San Juan Island, Orcas Island, Lopez Island, and a number of others less significant, which constitute the little archipelago lying between the Georgia Straits and the Straits of Juan de Fuca.

BRITISH AMERICA.—What is our gain (Columbia's) is British Columbia's loss. An interesting account of this languid and unenterprising colony, though rich in natural resources, is given in the last report of the Minister of Public Works of the Dominion of Canada. Speaking of the Chinook jargon which had its cradle there—the *lingua franca* of the New World—he says that it is based on French, English, and certain Indian tongues, among which is that of the Chililis or Chinooks, who live in the southern part of Columbia, and that it is indispensable in all commercial dealings with the natives. The French article is attached to the noun as an integral part, as in *labouti* (*bouteille*, bottle). The letter *r* is changed into *l*, as in *lablid* (*bride*, bridle); or is elided altogether, as in *lapouchete* (*fourchette*, fork), *lemahto* (*marteau*, hammer), *lesouk* (*sucre*, sugar). Very often the French noun is undisguised except by the incorporation of the definite article as in the examples given. Nor is the English without its witness. *Sun* is the Chinook expression for the day; a cascade is *tumwater*, and *house* and *bed* are in good repute with their proper meaning. Indian words

prevail, and include the numerals. Imitation words, as *tintin* for a bell and all kinds of musical instruments, are also observable. An American is called *Boston*—a reminiscence of the early ventures of the merchants of that city to the Oregon coast; an Englishman *King George*; and a Frenchman *Passioux*, a corruption of his true designation, *François*.

SOUTH AMERICA.—Three centuries before the passage of the Cape of Good Hope had been made there was a dye-wood known in Europe under the name of *bresill*, *brasy*, *brasilly*, *bresilji*, *braxilis*, and *brasile*, and derived from India. This name began to be assumed for Brazil in the first part of the 16th century (in an official document first in 1530.) Till then the country had been called Terra de Sancta Cruz.

ASIA.—The *entente cordiale* between Russia and the Khan of Khiva has not lasted long. The latter is determined to submit to Muscovite aggrandizement only as his peers of Khokan and Bokhara have done—after the supreme test of battle. Three Russian columns have been directed against him, from Karakool and two other points; and the result will soon be known.

OCEANICA.—The first news despatch from Australia to New York, by the Overland Telegraph and cables, was sent October 24 and printed in the morning papers here on October 26. This telegraph promises to be for Australia what the Pacific Railroad is to our Far West—the pioneer of discovery, settlement, and development. Since 1860-63, the period of Burke's and Stuart's and Mackinlay's attempts, more or less successful, to traverse the continent from north to south, there has been a lull in exploration. Already, however, in May of this year, upon the extension of the telegraph in the track of these hardy explorers, an expedition was undertaken from Mount Freeling (about  $23\frac{1}{2}^{\circ}$  South lat.,  $133^{\circ}$  East long.) to Perth, on the south-west coast. The leader was a Mr. Giles, and his course takes him through an absolutely unknown expanse of a thousand miles. Mr. A. G. Burt, while engaged in laying the Overland Telegraph, discovered a broad sheet of fresh water which he christened "Wood's Lake," to the west of Ashburton Range, in  $18^{\circ}$  South latitude.

—Some idea of the rapid growth of the settled portions of Australia may be had from the following table, copied from No. 39 of the Journal of the Berlin Geographical Society (p. 268):

|                            | <i>Males.</i> | <i>Females.</i> | <i>Total.</i> |
|----------------------------|---------------|-----------------|---------------|
| Census of May 12, 1836.... | 142           | 35              | 177           |
| " Nov. 8, 1836....         | 186           | 38              | 224           |
| " Sept. 12, 1839....       | 3,080         | 431             | 3,511         |
| " Mar. 2, 1841....         | 8,274         | 3,464           | 11,738        |
| " Mar. 2, 1846....         | 20,184        | 12,695          | 32,879        |
| " Mar. 2, 1851....         | 46,202        | 31,143          | 77,345        |
| " April 20, 1854....       | 155,895       | 80,903          | 236,798       |
| " Mar. 29, 1857....        | 264,334       | 146,432         | 410,766       |
| " April 7, 1861....        | 328,651       | 211,671         | 540,322       |
| " April 2, 1871....        | 400,252       | 329,402         | 729,654       |

The last census showed 17,813 Chinese, of whom only 43 were women; and 859 aborigines. The population of Melbourne proper was 55,798; with its suburbs, 193,698. The city of Ballarat was next in population: 40,651.

—According to the Sydney *Herald*, the schooner *Surprise* has lately made a visit to the coast of New Guinea, penetrating fifteen miles up the Manoa River. Contrary to the general impression, the natives, who were hitherto supposed to be ferocious in their character and opposed to the visits of strangers, were found to be mild and gentle in disposition. They were of the Malay stock, and had never seen white people before. On the departure of the schooner, under Captain Paget, they exhibited every demonstration of sorrow, the women weeping and the men accompanying the party to a considerable distance.—(*Nature*.) A Russian savant, by name Michlucho-Maclay, has devoted his life and fortune to the exploration of this interesting island, and when last heard from, in September, 1871, was established in a block-house on the north-east coast, somewhere between Humboldt Bay and the Louisiade Archipelago. His only companions are a Swedish sailor and a Polynesian, and he should by this time have begun his advance into the interior.

—In her recent exchanges of territory with Great Britain, Holland surrendered New Guinea and acquired full possession of Sumatra, and she has begun to extend a network of telegraphs over the whole island, and to build railroads across the plains. The elephant manifests a strong dis-

like to the telegraph poles, as, in the neighboring island of Java, do the buffalo and the rhinoceros.

—The exact population of the Philippine islands will not be ascertainable for a long time, as in all the islands there exist independent tribes. 1,232,544 inhabitants pay tribute to the Government, and are divided among 43 provinces and 933 villages. From them the total population is estimated at 7,451,352. Of these, 4,467, 111 are found in Luzon, in 508 villages; and 191,802 in Mindanao.

—The Fiji group of islands, 120 in number, is inhabited by about one hundred and fifty thousand of the darker of the two Polynesian races, and about three thousand Europeans, whose numbers are rapidly increasing. These islands have been the theater of missionary enterprise for forty or fifty years, and some sixty thousand of the natives are enrolled as members of the English Methodist Church, which has ten or twelve white missionaries on the islands, besides native helpers. It is remarkable that a special impulse to this civilization was given in 1855 by Commander Burtwell, of the American navy, in demanding from the king indemnity to the amount of \$45,000 for injuries done to American property by the natives. Unable to raise this amount, King Thakombau offered to accept the authority of England and declare his kingdom a province of the British empire, on condition of the payment of the indemnity fund. England, however, had begun to find colonies an expensive luxury, and hence she declined the offer. Meanwhile a company of capitalists was formed at Melbourne for the purpose of colonizing these islands and trading with them. On condition of paying the American indemnity they were granted two hundred thousand acres of land. Immigration began to increase, and several very profitable branches of agriculture were instituted. The exports are cotton, coffee, wool, cocoa-nut oil, dried cocoa, tropical fruits, ornamental woods, etc. Cotton, however, is likely to become the leading article of shipment and culture. Dr. Isaac M. Brower, formerly American Consul, gave a great impulse to this branch of production by introducing the seed of the Sea-Island cotton, which now produces the finest cotton in the world. It sells in Europe at from three to five shillings sterling per pound.

It is largely used in the silk manufactories of France in mixed silk fabrics. In Fiji the cotton plant is a perennial shrub, not requiring to be replanted oftener than every five or six years. A glance at the mercatorial map of the world will show the Fiji islands on nearly a direct line between San Francisco and Melbourne.—(*Washington Chronicle*.) Thakombau was the king or *tui* of Bau, and the colonists whom he summoned in have not been content to acknowledge his sovereignty without the guarantees of a written constitution. They set up one, ineffectually, in 1867, and another, with great solemnity, in 1871, June 5. This last is almost an exact copy of the Sandwich Islands constitution. On the 25th of July, 1871, Thakombau became the recognized head of the entire archipelago.

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*Periodical Literature*.—*American Naturalist* for September and October: "On the Geology of the Island of Aquidneck [or Rhode Island]"—two highly important papers by Prof. N. S. Shaler.

—Captain Burton has returned from his explorations in Iceland and deposited his collections and papers with the Anthropological Institute, London, being obliged to repair at once to Trieste to take the place of the late Charles Lever as British Consul at that port.—*Nature*, Sept. 26.

*Cartography*.—The Hereford (Eng.) Mappa Mundi has just been published in fac-simile. This remarkable map of the world, drawn on thick vellum and mounted on oak (53 inches by 63), was discovered about a century ago under the floor of Bishop Audley's Chapel. The name of the author (Richard of Holdingham and Sleaford in Lincolnshire) was revealed by certain metrical lines, in Norman French, in one of its corners. It was executed between 1290 and 1310. The

mediævalists believed that three philosophers, Nichodorus, Theodotus, and Polictus, were sent out by Augustus Cæsar at the birth of our Lord to survey the world, and all maps like these show the supposed results of their observation. The emperor is shown in this map giving the philosophers their credentials. The earth is represented as a circular island with the ocean flowing round it; Jerusalem is in the centre, and the other most-distinctly shown cities are Babylon, Rome, and Troy. The editors of the fac-simile, in a prospectus, observe—"This arrangement is common to most of the mediæval maps of the world, but the Hereford Map is distinguished from the rest by its great size, its elaborate drawing, its illustrations of objects in natural history and of historical facts, and its numerous inscriptions, many of which are of great interest in an archæological point of view. It may be regarded as the most complete representation in existence of those speculative notions of our forefathers regarding the earth, which speedily gave way upon the advance of actual geographical knowledge in the fifteenth century."—*Athenæum*, September 14.

—Adolph Stieler's Hand-Atlas, Part IX., (New York: L. W. Schmidt) gives the first of six plates which will embrace the whole of the United States. The present one contains all the region west of 107° and north of 39° to the Pacific Coast. "Yellowstone National Park" is boldly inscribed in the right place, showing to how late a date the map is brought down. No cheaper outlay can be made than to procure this set of six maps for \$3.00, including twelve other first-class maps of various parts of the world. A little enterprise on the part of teachers, and liberality on the part of school-committees, would cause such opportunities to be improved without delay.

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### THE RIVER NILE.

THE bed of the Nile, like that of the lower Mississippi, is higher than the valley through which it passes. Warburton said: "The Nile's bed is a sort of savings-bank, by means of which the deposits of four thousand years have enabled him to rise in the world and run along a causeway of his own." It is the only river in the world which runs upward of twelve hundred miles, in undiminished volume, without a tributary stream. It moves on its long course without the help of even a creek, tapped by innumerable canals and thirsty gardens with which it is fringed, absorbed by hot sand banks and hotter sun, and empties greater bulk at its mouths than it has between the cataracts. The products of Egypt are the gifts of this stream. The lands on which the towns and hamlets of Egypt repose is foreign soil, brought from the far south by this public carrier. For more than four thousand years he has faithfully brought his burden and deposited it at the feet of Egypt. The Rameses and the Ptolemies come and go, and the Nile remains unchanged.



*ELEMENTARY EDUCATION.*

TO those persons who are accustomed to consider our colleges as the inner sanctuary of all learning, and those brave youths of ours who succeed in entering their august portals as far beyond the need of rudimental instruction, the statements of Professor Tyler, of the University of Michigan, in regard to the orthographic performances of some of the students of that institution will no doubt seem startling.

"Here," he says, "are a few gems which I found glittering in essays written by Sophomores: 'axidental,' 'wrot iron,' 'meny,' 'scientiffic,' 'tital,' 'imoral creachers,' 'opper-tunities,' 'lucretive,' 'merchantile,' 'the vast pararies of the west,' 'togather,' 'has to pas,' 'perhapse.'"

And again, he says: "One year I had the curiosity to see what I could collect of this kind from the speeches carefully prepared for Junior Exhibition by members of the classical section of the class, then in the third year of its course; and this was the luck I had: 'ageant,' 'unintelligable,' 'contrairy,' 'plausable,' 'Cipio Africanus,' 'clowd of darkness,' 'faverite.' I will add that the samples now given were taken from the writings of students who have been since graduated; but that the supply is still apparently as abundant as ever."

When we remember that the University of Michigan ranks among our half dozen best colleges, such disclosures as the foregoing are mortifying to our national vanity. Even when we take into consideration the fact that these orthographic curiosities were, in all probability, taken from the productions of the lowest scholars of junior classes, they still remain a rather heavy drawback upon the spread-eagle style of talk about our educational institutions, in which Americans have been known to indulge.

What have we a right to infer from such revelations, in regard to the public and private schools which have sent, and continue to send, young men to college so lamentably deficient in things which boys in their jackets should blush not to know? Are not our schools, as in fact we are in most matters, in too great a hurry? Too eager for Latin

and Greek to give time and attention to the very elements of our own language? Our children are in many cases allowed to escape much too early, not only from their spelling books, but from their Geographies and Grammars. No sooner have they learned to read with some fluency, and obtained a slight smattering of these elementary branches, than they suddenly begin to shoot forward on a sort of mental velocipede into more advanced studies, skimming so lightly over the intermediate ground that it is nearly impossible for them to gain more than a meagre knowledge of the landmarks.

Another great obstacle in the way of the thorough elementary education of our children is, we think, the senseless habits of study which many of them are allowed to contract. We have frequently noticed studious children "pegging" away as if for dear life at a lesson, repeating the same thing over and over, perhaps twenty times in succession, but in a thoughtless, mechanical way which prevented their gaining the knowledge of the subject which two or three times careful reading would have given them.

And again, unless children are peculiarly bright and eager to understand "what it's all about," they will frequently study, if allowed to do so, with about as clear a comprehension of what they are trying to learn as we expect them to have of the precession of the equinoxes. We have in mind a youth of fourteen, to whose recitation in arithmetic we once listened. On being asked the question, "For what is cubic measure used?" the answer being "For measuring solid bodies," the poor deluded youth replied promptly, and as though rather proud of knowing his lesson so well, "For measuring souls and bodies."

This is doubtless an exaggerated case (though we have heard of others almost as absurd), but it will serve, we think, as a striking illustration of the necessity which exists for teaching our children *how* to study.

D. D.

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KNOWLEDGE will soon become folly, when good sense ceases to be its guardian.

*WHAT KNOWLEDGE IS OF MOST WORTH?*

## XI.—STUDIES BEST ADAPTED FOR DISCIPLINE.

THUS far our question has been, the worth of knowledge of this or that kind for purposes of guidance. We have now to judge the relative values of different kinds of knowledge for purposes of discipline. This division of our subject we are obliged to treat with comparative brevity; and happily, no very lengthened treatment of it is needed. Having found what is best for the one end, we have by implication found what is best for the other. We may be quite sure that the acquirement of those classes of facts which are most useful for regulating conduct, involves a mental exercise best fitted for strengthening the faculties. It would be utterly contrary to the beautiful economy of Nature, if one kind of culture were needed for the gaining of information and another kind were needed as a mental gymnastic. Everywhere throughout creation we find faculties developed through the performance of those functions which it is their office to perform; not through the performance of artificial exercises devised to fit them for these functions. The Red Indian acquires the swiftness and agility which make him a successful hunter, by the actual pursuit of animals; and by the miscellaneous activities of his life, he gains a better balance of physical powers than gymnastics ever give. That skill in tracking enemies and prey which he has reached by long practice, implies a subtlety of perception far exceeding anything produced by artificial training. And similarly throughout. From the Bushman, whose eye, which being habitually employed in identifying distant objects that are to be pursued or fled from, has acquired a quite telescopic range, to the accountant whose daily practice enables him to add up several columns of figures simultaneously, we find that the highest power of a faculty results from the discharge of those duties which the conditions of life require it to discharge. And we may be certain, *à priori*, that the same law holds throughout education. The education of most value for guidance, must at the

same time be the education of most value for discipline. Let us consider the evidence.

One advantage claimed for that devotion to language-learning which forms so prominent a feature in the ordinary *curriculum*, is, that the memory is thereby strengthened. And it is apparently assumed that this is an advantage peculiar to the study of words. But the truth is, that the sciences afford far wider fields for the exercise of memory. It is no slight task to remember all the facts ascertained respecting our solar system ; much more to remember all that is known concerning the structure of our galaxy. The new compounds which chemistry daily accumulates, are so numerous that few, save professors, know the names of them all ; and to recollect the atomic constitutions and affinities of all these compounds, is scarcely possible without making chemistry the occupation of life. In the enormous mass of phenomena presented by the Earth's crust, and in the still more enormous mass of phenomena presented by the fossils it contains, there is matter which it takes the geological student years of application to master. In each leading division of physics—sound, heat, light, electricity—the facts are numerous enough to alarm any one proposing to learn them all. And when we pass to the organic sciences, the effort of memory required becomes still greater. In human anatomy alone, the quantity of detail is so great, that the young surgeon has commonly to get it up half-a-dozen times before he can permanently retain it. The number of species of plants which botanists distinguish, amounts to some 320,000 ; while the varied forms of animal life with which the zoologist deals, are estimated at some two millions. So vast is the accumulation of facts which men of science have before them, that only by dividing and subdividing their labors can they deal with it. To a complete knowledge of his own division, each adds but a general knowledge of the rest. Surely, then, science, cultivated even to a very moderate extent, affords adequate exercise for memory. To say the very least, it involves quite as good a training for this faculty as language does.

But now mark that while for the training of mere memory, science is as good as, if not better than, language ; ~~it has an~~

immense superiority in the kind of memory it cultivates. In the acquirement of a language, the connections of ideas to be established in the mind correspond to facts that are in great measure accidental ; whereas, in the acquirement of science, the connections of ideas to be established in the mind correspond to facts that are mostly necessary. It is true that the relations of words to their meaning is in one sense natural, and that the genesis of these relations may be traced back a certain distance ; though very rarely to the beginning ; (to which let us add the remark that the laws of this genesis form a branch of mental science—the science of philology.) But since it will not be contended that in the acquisition of languages, as ordinarily carried on, these natural relations between words and their meanings are habitually traced, and the laws regulating them explained ; it must be admitted that they are commonly learned as fortuitous relations. On the other hand, the relations which science presents are casual relations ; and, when properly taught, are understood as such. Instead of being practically accidental, they are necessary ; and as such, give exercise to the reasoning faculties. While language familiarizes with non-rational relations, science familiarizes with rational relations. While the one exercises memory only, the other exercises both memory and understanding.

Observe next that a great superiority of science over language as a means of discipline, is, that it cultivates the judgment. As, in a lecture on mental education delivered at the Royal Institution, Professor Faraday well remarks, the most common intellectual fault is deficiency of judgment. He contends that “society, speaking generally, is not only ignorant as respects education of the judgment, but it is also ignorant of its ignorance.” And the cause to which he ascribes this state is want of scientific culture. The truth of his conclusion is obvious. Correct judgment with regard to all surrounding things, events, and consequences, becomes possible only through knowledge of the way in which surrounding phenomena depend on each other. No extent of acquaintance with the meaning of words, can give the power of forming correct inferences respecting causes and effects. The constant habit of drawing conclusions from data, and

then of verifying those conclusions by observation and experiment, can alone give the power of judging correctly. And that it necessitates this habit is one of the immense advantages of science.

Not only, however, for intellectual discipline is science the best; but also for *moral* discipline. The learning of languages tends, if anything, further to increase the already undue respect for authority. Such and such are the meanings of these words, says the teacher or the dictionary. So and so is the rule in this case, says the grammar. By the pupil these dicta are received as unquestionable. His constant attitude of mind is that of submission to dogmatic teaching. And a necessary result is a tendency to accept without inquiry whatever is established. Quite opposite is the attitude of mind generated by the cultivation of science. By science, constant appeal is made to individual reason. Its truths are not accepted upon authority alone; but all are at liberty to test them—nay, in many cases, the pupil is required to think out his own conclusions. Every step in a scientific investigation is submitted to his judgment. He is not asked to admit it without seeing it to be true. And the trust in his own powers thus produced, is further increased by the constancy with which Nature justifies his conclusions when they are correctly drawn. From all which there flows that independence which is a most valuable element in character. Nor is this the only moral benefit bequeathed by scientific culture. When carried on, as it should always be, as much as possible under the form of independent research, it exercises perseverance and sincerity. As says Professor Tyndall of inductive inquiry, "it requires patient industry, and an humble and conscientious acceptance of what Nature reveals. The first condition of success is an honest receptivity and a willingness to abandon all preconceived notions, however cherished, if they be found to contradict the truth. Believe me, a self-renunciation which has something noble in it, and of which the world never hears, is often exacted in the private experience of the true votary of science."—*Herbert Spencer.*

*FUNCTIONS OF THE BRAIN.*

**I**F the manifestations of the brain's functions were the earliest to attract the attention of philosophers, they will assuredly be the last to receive explanation from physiologists. We believe that the progress of modern science allows us now to approach the subject of the physiology of the brain; but, before beginning the study of the cerebral functions, we must clearly understand our point of departure. In this essay, we have attempted to state only one term of the problem, and to show how untenable is the opinion that the brain forms an exception in the organism, and is the *substratum* of intelligence instead of being its instrument. This idea is not only an absolute conception, but an unscientific one, injurious to the progress of physiology and psychology. Indeed, what sense is there in the notion that any apparatus of Nature, whether in its lifeless or its living domain, can be the seat of a phenomenon without being its instrument? Preconceived ideas clearly have a great influence in discussing the functions of the brain, and a solution is combated by arguments used for the sake of their tendency. Some refuse to allow that the brain can be the organ of intelligence, from fear of being involved by that admission in materialistic doctrines; while others eagerly and arbitrarily lodge intelligence in a round of fusiform nerve-cells, for fear of being charged with spiritualism. For ourselves, we are not concerned about such fears. Physiology tells us that, except in the difference and the greater complexity of the phenomena, the brain is the organ of intelligence in exactly the same way that the heart is the organ of circulation, and the larynx that of the voice. We discover everywhere a necessary bond between the organs and their functions; it is a general principle, from which no organ of the body can escape. Physiology should copy the example of more advanced sciences, and free itself from the fetters of philosophy that would impede its progress; its mission is to seek truth calmly and confidently, its object is to establish it beyond doubt or charge, without any alarm as to the form under which it may make its appearance.—*Claude Bernard, in Popular Science Monthly.*

*ANCIENT ENGINEERING AMONG THE CHINESE.*

THE most remarkable evidence of the mechanical science and skill of the Chinese so far back as 1,600 years ago is to be found in their suspended bridges, the invention of which is assigned to the Han dynasty. According to the concurrent testimony of all their historical and geographical writers, Sangleang, the commander of the army under Baou-tsoo, the first of the Hans, undertook and completed the formation of the roads through the mountainous province of Shense, to the west of the capital. Hitherto its lofty hills and deep valleys had rendered the communication difficult and circuitous. With a body of one hundred thousand laborers he cut passages over the mountains, throwing the removed soil into valleys, and, where this was not sufficient to raise the road to the required height, he constructed bridges which rested on pillars or abutments. In another place he conceived and accomplished the daring project of suspending a bridge from one mountain to another across a deep chasm. These bridges, which were called by the Chinese writers, very appropriately, flying bridges, and represented to be numerous at the present day, are sometimes so high that they cannot be traversed without alarm. One still existing in Shense stretches four hundred feet from mountain to mountain, over a chasm of five hundred feet. Most of these flying bridges are so wide that four horsemen can ride on them abreast, and balustrades are placed on each side to protect travelers. It is by no means improbable (as M. Panthier suggests), as the missionaries to China made known the fact more than a century ago that the Chinese had suspended bridges, that the ideas may have been taken thence for similar construction by European engineers.—*Popular Science Monthly.*

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CARDINAL WOLSEY, one of the greatest ministers of state that ever was, poured forth his soul in these sad words—"Had I been as diligent to serve my God, as I have been to please my king, he would not have forsaken me now in my grey hairs."



*EDUCATION IN ENGLAND.*

## WORKING OF THE EDUCATIONAL SYSTEM IN LONDON.

TWO years ago we were all rejoicing over what we rather presumptuously called the settlement of the National Education question. Although the scheme then carried through Parliament was avowedly a compromise, it was considered to be one which would be supported by an overwhelming majority. Setting aside the few bigots who insisted upon secular education pure and simple, and the few bigots who would have none but an exclusively clerical scheme of education, it was hoped that we should all agree to work the machinery as energetically as possible, and then all kinds of desirable results would follow. All the neglected population of our streets would be forced into familiarity with the three Rs. England would, like Prussia, be thoroughly drilled into education. The schools provided by the official boards and the schools provided by the various denominations would coöperate harmoniously, and there would be at worst a sufficient degree of emulation to stimulate all persons concerned to the fullest exertion of their energy. These roseate expectations, like most others of the kind, have been doomed to disappointment. If not altogether abandoned, we are compelled to admit that the day of realization is further off than we had originally supposed, and that, in short, we had immensely underrated the extraordinary difficulty of the task which lies before us.

Thus, for example, in London a controversy has recently arisen which strikingly illustrates the various perplexities which are not yet cleared up. In the early days of enthusiasm, men of unusual distinction allowed themselves to be nominated for the board. Lord Lawrence and Prof. Huxley—to mention no others—were amongst the first members, though both of them have since been compelled to retire from ill health. The debates of the board were anxiously watched, and it was hoped that we should speedily witness unmistakable results of their labors. The debates, however, prolonged themselves after the fashion of most parliamen-

tary performances, and a certain degree of impatience began to be manifested. Most people became rather tired of watching the course of affairs, and we had sunk into comparative indifference, when, at last, the board, having made elaborate preparations for its campaign against ignorance, began decidedly to take the field. New schools are being built; some have actually come into operation; and an attempt has been made to put in force the provisions for compulsory education. A certain number of previously neglected children have been forced into the schools. Straightway there arises a sudden shock of indignation, showing that jealousies which were supposed to be extinct are still in full force, and that the whole battle, which occupied Parliament for a session, is to be fought over again in the petty parliament of the school-boards; and that questions which Parliament evaded by committing their decision to the local bodies, are now pressing for a solution. The immediate cause of the explosion occurred at certain schools in the North of London. The visitors appointed by the board had succeeded in sending to a school already established some thirty children, who had hitherto been completely neglected. Well, one might have thought, here was a cause for rejoicing. The school would certainly welcome these little outcasts, at any rate, if their fees could be paid by the school-board. On the contrary, the children were summarily dismissed, and the managers of the school were indignant at the burden thrust upon them. Their reason was that these unfortunates belonged to the class variously designated as "waifs and strays," "street Arabs," or "gutter-children." They were poor little hangers-on upon the lowest fringe of society, who had learnt the worst of language if they had learnt nothing else, whose clothing was not even decent, and who were suspected of bringing with them physical as well as moral contagion. They were therefore received much as a sweep would be received in a first-class railway carriage. If you force these children to school, it was urged, you ought to provide a separate place for them. There are lines of demarcation amongst the London poor just as deep and wide as those which separate the aristocracy and the middle-classes. The child of the decently-clad artisan alto-

gether refuses to be mixed up with the child of the poor beggar or crossing-sweeper. The spirit of caste, in short, raises difficulties as great as those raised by the spirit of religious bigotry.

But other complications speedily arose. The school-board naturally does not wish to open the doors of the new schools to this social refuse. It desires to make its own education a model; if its system is to be weighted by having all the refuse, a slur will be thrown upon it, and it will not be able to compete on equal terms with the denominational schools. There is nothing, it may be, which the denominational schools would like better. If the schools founded by the board are left empty, the advocates of the old system declare them to be useless; if they are filled, the same persons maintain that they are filled by draining the old schools, and that no real addition is made to the educational resources of the country. The representatives of the denominational party on the board are strongly inclined to hamper its efforts in every way that occurs, in order to prevent its competing effectually with the schools now established. The clergy, indeed, all over the country look askance upon school-boards generally, and are only too ready to denounce them as useless and expensive incumbrances. Meanwhile, if the board tries to set up an inferior class of schools for the poorest children, in order to draft them off from the better schools, it meets with a new set of difficulties. In the first place, there is the obvious difficulty of enforcing a system to which Englishmen are so little accustomed, and especially of enforcing it in the case of children whose earnings form a considerable part of the resources of the family. If a boy picks up a few pence a day by selling newspapers or matches, and you force him into school, it may be that his family will not be able to support him. And thus arise all kinds of delicate questions, which the board is scarcely able to answer. They have no sufficient machinery for deciding upon the degree of poverty of the parents and of knowing whether or not they can afford to pay school-pence, or afford even to be deprived of the services of their children. And here again comes in a conflict of authority with the system of poor-law relief. The

workhouses have already large schools, at which the children of paupers are educated. Should the guardians or the school-board deal with the lowest class of children, or how should the limits of their duties be defined ?

These difficulties are suggestive enough of the complexity of the problem. There is no reason to suppose them insuperable, or even to suppose that they are not in the way of being overcome. But it is clear that the school-board has to organize a system of compulsion for which our habits have not in the smallest degree prepared us, and that in so doing they have to encounter not only the prejudices of the parents but the jealousies of numerous religious bodies already in possession of the ground, and ready to contest every inch of the way ; and, moreover, to solve a variety of intricate social and economical problems. Meanwhile, public interest in the matter has rather flagged : people are unreasonably disappointed because their unreasonable anticipations were not fulfilled ; and there are plenty of parish politicians who are only too ready to get up an agitation against any system which involves a pressure upon the rates. There are loud assertions that the whole thing is a failure, and suggestions that our old comfortable way of letting things alone had its advantages. How far greater results might have been fairly anticipated is a question which I am not qualified to answer ; perhaps no one could. It was certainly natural enough to expect some more tangible fruits of two years' legislation ; but, on the other hand, the outcry seems to prove that the board is really getting to work at last ; and the complaints themselves demonstrate, if there were any necessity for such demonstration, that they have an ample field for labor. This vast disorganized mass of houses presents, of course, the most aggravated case ; and it is here more than anywhere that social difficulties have out-run all attempts to grapple with them. It must be a work of many years to bring anything like order out of such a huge fragment of chaos. In other towns the work is apparently further advanced ; and we may hope that more real impression is being produced on the appalling masses of ignorance and poverty. Meanwhile, the process must be slow, and moreover a good deal of heat will be generated while it lasts.

One question which seems pretty certain to arise in the next session will probably illustrate the intensity of the religious animosities which at present exhaust themselves chiefly in school-board questions. Mr. Gladstone can hardly avoid longer proposing some settlement of the Irish University question. It is idle to speculate on the nature of the solution which he will propose. He is watched by several parties, whose antipathies are so marked that it will indeed be a feat of statesmanship if he succeeds in removing them all. The Roman Catholics, who insist upon the endowment of their university; the Protestants, who will be scandalized by any kind of concession to Catholicism; the Radicals, who object to any encouragement to the denominational system, whether Catholics or Protestants are to reap the benefit, have the materials for a very pretty triangular duel; and when we consider that the question has to be fought out upon an Irish topic, and is therefore in no danger of being treated with coldness, or confined within strictly logical limits, we may anticipate a lively session. The leaders of both parties have complicated matters by flirtations with the Irish bishops and their opponents which will give ample opportunity for personal recrimination. It is not beyond the bounds of probability that this may be the shoal on which Mr. Gladstone's government will be finally wrecked, in spite of the skill with which he has hitherto frustrated the predictions of his opponents. Such speculations, however, are as yet premature; for we have been treated to no foreshadowings of policy from which the keenest of political prophets could infer the future.—*Correspondence of the Nation.*

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### JOSH BILLINGS ON SILENCE.

SILENCE iz a still noise.

One ov the hardest things for a man to do, iz to keep still.

Everybody wants tew be heard fust, as this iz jist what fills the world with nonsense.

Everybody wants tew talk, few want to think, and nobody wants to listen.

The greatest talkers among the feathered folks, are the magpie and ginny hen, and neither ov them are of much account.

If a man ain't sure he iz right the best kard he kan play iz a blank one.

I have known menny a man tew beat in an argument by just nodding his head once in a while and simply say, "*jess so, jess so.*"

It takes a grate menny blows to drive in a nail, but one will clinch it.

Sum men talk just as a French pony trots, all day long, in a haff bushel meazzure.

Silence never makes enny blunders, and alwuz gits az much credit az iz due it, and oftimes more.

When i see a man listening to me cluss i alwuz say to miself, "*look out, Josh, that fellow iz taking your meazzure.*"

I hav heard men argy a pint two hours and a haff and not git enny further from where they started than a mule in a bark mill, they did a good deal ov going round and round.

I hav sat on jury's and had a lawyer talk the law, fakts and evidence ov the kase all out ov me, besides starting the taps on mi boots.

I hav bin tew church hungry for sum gospel, and cum hum so phull ov it that i couldn't draw a long breth without starting a button.

Brevity and silence are the two grate kards, and next to saying nothing, saying a little, iz the strength ov the game.

One thing iz certain, it iz only the grate thinkers who kan afferd tew be brief, and thare haz been but phew volumes yet published which could not be cut down two-thirds, and menny ov them could be cut clean back to the title page without hurting them.

It iz hard tew find a man ov good sense who kan look back upon enny occasion and wish he had sed sum more, but it iz easy tew find menny who wish they had said less.

A thing sed iz hard tew recall, but unsed it kan be spoken any time.

Brevity iz the child of silence, and iz a great credit tew the old man.

## THE AGE OF NIAGARA.

AN element in the problem of Niagara's age is the flow of water. To construct a scale from the present and apply it to the past, we should know that the amount of water in past ages has been essentially the same as now.

About 9,800 cubic miles of water—nearly half the fresh water on the globe—are in the upper lakes, and 18,000,000 cubic feet in this plunge over Niagara Falls every minute; all the water of the lakes making the circuit of the Falls, the St. Lawrence, the ocean, vapor, rain, and lakes again, in 152 years. Through the Illinois Canal about 8,000 cubic feet of water are taken every minute from Lake Michigan to the Illinois River; through the Welland Canal 14,000 cubic feet flow every minute from Lake Erie into Lake Ontario, and through the Erie Canal 30,000 cubic feet pass every minute from the same lake into the Hudson. Thus 52,000 cubic feet of water, which nature would give to Niagara, are diverted every minute by artificial channels, some into the Mexican Gulf and some into the Bay of New York. Add this to 18,000,000, it is as a drop in the bucket, and would make no appreciable difference in the character of the Falls or their rate of recession.—*Popular Science Monthly*.

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## HOW PENCIL LEADS ARE MADE.

GRAPHITE, clay, and water are the materials used. The finest graphite, after being finely ground, is mixed with a peculiar blue clay, found only in Bavaria, and the whole kneaded with water to the consistency of putty. This mess is placed in a strong cylindrical iron vessel, in the bottom of which is a hole of the diameter of the lead desired. A plunger forces the mixture out through this small opening, which is received on metallic sheets, which, when filled, are placed in an oven for baking. The softness or hardness of the pencil depends upon the degree of hardness to which the baking is carried. The leads are afterward broken up into the sizes required. Nine different sizes of leads are made, and number from 1 to 9.

## CORRESPONDENCE.

MR. EDITOR,—I have been exceedingly interested in reading two articles in late numbers of the *EDUCATIONAL MONTHLY*; one upon the "Common Errors of School Histories," and the other on the "Origin of the Names of States." I am greatly obliged to the authors of these papers for the valuable information they have given us. As teachers we cannot be too grateful for any aid in rendering our instruction more exact and critical. I have, however, several points of disagreement from the authors, and will name two or three by way of illustration. All of our United States histories state that in 1622 Gorges and Mason obtained a grant of land lying between the Merrimac, the Kennebec and St. Lawrence rivers, which they called Laconia, and which was afterward divided between them, Mason taking the part lying west of the Piscataqua, calling it New Hampshire, and Gorges the portion lying east, naming it the province of Maine. I have not your article by me, yet I remember that this statement was called in question. I should be glad to know the authority for the contradiction. Bancroft says, (Vol. I, p. 328,) "Gorges and Mason took a patent for Laconia, the whole country between the sea, the St. Lawrence, the Merrimac and the Kennebec (Aug. 10, 1622). Hildreth (Vol. I, p. 168) repeats the assertion. He also says (Vol. I, p. 200) that in "1629 Mason and Gorges had made a partition of their province of Laconia, and Mason had obtained in his own name a new and separate grant for that portion of it between the Merrimac and the Piscataqua, etc. This new province was called New Hampshire." I can quote other and equally definite authorities. Now while they are unanimous and universally accepted, how dare the teacher change our statements except upon the most reliable counter authorities, and is it quite fair to lay the burden of the error—if there be one—on the backs of the school histories when they merely follow Bancroft, Hildreth and other acknowledged historians?

Again, Carolina is said to be named from Charles IX of France. I admit the name was originally applied to Ri-



baut's fort in 1562, at Port Royal, and afterward to Laudonniere's on the St. John. But these settlements were failures, and the first permanent colonies were planted by the English upon the grant given in 1663 to Samuel Clarendon and others by Charles II. The name originally was merely local, i. e., the forts were thus designated. In the patent of 1663 it was formally applied to the territory afterward divided into North and South Carolina, and, being given by Charles II, it is natural to suppose that these States were named after him rather than after a king of France who had been dead over a half of a century when the colonies were established.

With regard to the story of Pocahontas, I only say, *Cui bono?* I confess I have little sympathy with those iconoclasts who run through the records of the past knocking off all their romance and beauty. Suppose the story may possibly be in part a fiction of Smith's, what of that? It does not injure the facts and does make them entertaining. Why is the early history of Virginia better remembered than that of any other State in the Union? I really wish we had as good and harmless a fiction—if it be one—thrown around every great historical event to make it interesting and impress it on our minds. I have read the controversy about the character of Pocahontas, but have felt little inclination to join in the effort to soil the pure and beautiful reputation which the little Indian maiden has acquired. You remember what Washington Irving says of the "Vampires of history?"

I could name other points upon which I disagree, but refrain. I state these not in the spirit of hostile criticism, but merely because in the search after truth we must examine both sides. Your authors seem to have caught a glimpse of a side I have not seen very clearly, and I would like to have it fully exhibited.

Very sincerely yours,

J. DORMAN STEELE.

*Elmira, 1872.*

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THE GERMANS have established no university for the last half-century. Their plan is to strengthen those they have, rather than to found new ones.

## A QUESTION FOR GRAMMARIANS.

CARBONDALE, ILL., Nov., 1872.

MR. EDITOR,—To-day my class in "Analysis" met with a difficulty. A young lady, in analyzing the sentence, "*You must study*," called it a simple *declarative* sentence. The objection to this statement was that the sentence could be nothing else than *imperative*.

The ground taken was good. If I, as teacher, had told one of them to study, using the language of the sentence, he or she would have regarded it as a *command*.

I decided that it was declarative, though having the form of a command.

Will your grammatical editor give us his opinion in the EDUCATIONAL MONTHLY?

These discussions arose among Misses just entering their *teens*.

Hoping to see an answer in the MONTHLY, I am, yours truly,

S. H.

## CURRENT PUBLICATIONS.

LITERATURE has certainly been favored of late years in the line of various new methods of acquiring the modern languages; all of which, however little or much they may differ in other respects, seem at least to agree in this—that there ought to be and is some easier way of getting hold of a language than the old traditional one of polling over a dictionary, and translating from the foreign into the vernacular. Here is a new book,<sup>1</sup> for instance, by Mr. Woodbury, which claims to be an improvement on his former "New Method of learning to Read, Write and Speak German." Now, what we want in a book of this kind which purports to teach a language, is one of two things: either that it should be a grammar, systematically arranged, with the nouns, adjectives, pronouns and verbs declined and in

<sup>1</sup> A Practical Course with the German Language, by W. H. Woodbury, A. M. New York and Chicago: Ivison, Blakeman, Taylor & Co.

their places, so that we know where to find them, and the rules of syntax also arranged in some order with their lists of exceptions as complete as may be, so that the book can be used for reference as well as for study ; or else, that it should ignore the statement of rules as much as possible, and endeavor, on the other hand, to instil into the pupil the genius of the language, by the learning of idioms and the constant repetition of sentences, written and spoken, from German to English, and from English back again into German. To try to unite these two methods in one book is sure to make it cumbersome and to result in incompleteness in both, and this is just the trouble with the volume before us. As a grammar it is unmethodical in the extreme. Fish, flesh and fowl are mixed up into such an indistinguishable pot-pourri, that it is next to impossible for one to find what one wants, even with the aid of the index which is tolerably complete—that is, it would be impossible even if all that one wanted were there, but all that one wants in a grammar is not there, unless one is satisfied with a very incomplete treatise of the language.

On the other hand, as an easy, practical course for beginners in German, it is spoiled by this very grammar which it carries along with it all the way through. It contains too many unnecessary rules in the beginning of the book. The very idea of these learning-made-easy methods is to get the student interested in the language, by starting him on the simplest imaginable sentences where all languages are more or less alike, before initiating him into any of its peculiarities. To specify ; there is no need of burdening the pupil's mind at the outset with the three genders, and their various terminations. A better course, in our opinion, is to take up one of the genders first—as Ahn does in his last edition—the masculine, for instance, and keep at that until the learner gets to be familiar with the various masculine terminations in the different cases, and then go on to the feminine and neuter ; for after all, one of the most annoying things to the average scholar, in beginning German, is this very subject of gender. And here let us speak of the folly of crowding into a book of this kind such long lists of exceptions and of words of peculiar formation, as we find—opening the book

at random—on the 92d page, where thirty-three feminine nouns are enumerated that add *e* in the plural and take the *umlaut*; and turning over five pages further we have two more lists of nouns, masculine and neuter, of from forty to fifty words apiece, that have some peculiarity about them; and going on a little further yet we come across nearly three entire pages of disconnected words of various kinds. Now for what end is all this? Is it intended that the scholar should commit these to memory? No scholar will do it, and it would do him no good if he did. It is pretty generally agreed upon that there is no way of making oneself master of these forms except by their repeated use in sentences, just wherein this book fails for the simple reason that it is so filled up with other things that it has not room enough for exercises. These lists of words are interesting enough to look over, but so far from forming a necessary part of the book—like the classified nouns occupying from page 271 to 293—they are just so much useless lumber. The English-German as well as German-English vocabulary in the back of the book is a good idea, and saves the learner much unnecessary trouble.

Turning from the book as a whole, we would beg leave to call attention to a few particular points. On p. 18, in the pronunciation of vowels, two sounds are given for *o*; long, as *o* in *no*, and short, as *o* in *not*. This latter is new to us. The short *o* in German, is an altogether different sound from our short *o*, which very nearly resembles the German *a*. In the word *Gott*, for instance, where the *o* is short, the sound is very nearly like *o* in *or*, only shorter, entirely distinct from the *o* in *not*. Again, on the 19th page, in speaking of *b*, *d* and *ng*, the author omits to state that at the end of syllables they are pronounced like *p*, *t* and *nk* respectively; and in the pronunciation of initials *S* and *W*, page 20, we are told that *S* has a sound between our *S* and *Z*, and *W* between our *W* and *V*! As for initial *S*, we challenge the acutest ear to distinguish between the *S*, for instance, in the German word *Sohn* and *Z* in our word *Zone*. The sound is precisely alike in both instances. But what shall we say about that sound between *W* and *V* which the student must acquire before he can hope to pronounce the German *W*? Such a hybrid

among the consonants we have never before been introduced to. Unfortunately the author has given us nothing to follow in striving to catch this nicety of sound, and we are left to to imagine what it may be like. The best of German teachers in Berlin say that *W* is always pronounced like our *V*, even when it immediately follows one or more consonants in the same syllable; and that this adapting it to our *W* sound is an innovation from German Pennsylvania or else a provincialism from Swabia. We beg leave also to call attention to the bungling expression *von zu Hause*, page 71, an exact equivalent of which in English would be *from at home*. In German orthography the author seems to follow no fixed principle at all. Thus he spells Köln sometimes with a *k* and sometimes with a *c*; the word Doctor likewise appears with both a *k* and a *c*; *Lexicon* is written only with a *c*, not to mention other incongruities.

Aside from these inaccuracies which we have pointed out, the general plan of the book seems to fail in this—that while it loads the student with too many rules, exceptions and vocabularies, in proportion to the number of exercises to render it an easy, practical course, it is not, on the other hand, a sufficiently scientific discussion of the German language to warrant its being very useful as a Grammar of reference.

H. P.

THE INTERNATIONAL SCIENTIFIC SERIES (\*) is initiated by Dr. Tyndall's "Forms of Water in clouds and rivers, ice and glaciers." The book contains about 200 pages, is well illustrated and is a handy book. Other commendation of its matter, than mentioning its author's name, is quite unnecessary. The "International Scientific Series" is intended to form an elegant and valuable library of popular science, "fresh in treatment, attractive in form, strong in character, moderate in price, and indispensable to all who care for the acquisition of solid and serviceable knowledge." The American editor explains that some systematic effort of this kind must be made to counteract the tendency of careless and unscrupulous book-makers who cater to public ignorance and love of the marvellous, and who foist their

crude productions upon those who are too little instructed to judge of their real quality.

The same publishers have just begun another series entitled, "Science Primers," edited by Professors Huxley, Roscoe and Balfour Stewart. II is on Chemistry and III is on Physics.

ART EDUCATION, SCHOLASTIC AND INDUSTRIAL, by Walter Smith, State Director of Art Education in Massachusetts, is an elaborate and learned work just from the press of Messrs. James R. Osgood & Co. We shall have occasion from time to time to give our readers extracts from its pages.

PUTNAM'S HANDY BOOK SERIES, so far, has two books issued. The first is "How to Educate yourself, with or without masters." It is prepared by George Cary Eggleston. The second is "Social Economy," by J. E. Thoro'd Rogers.

E. H. BUTLER & CO.'S NEW AMERICAN SERIES has just been increased by "The Etymological Reader." Its authors claim this book to be the first systematic attempt to associate the study of Etymology with exercises in reading. The fitness of this association need not be questioned.

THE LAWRENCE SPEAKER is a selection of literary gems in prose and poetry, by Philip Lawrence. The compiler claims that this work contains not only the finest productions of authors known to fame, but also a number of anonymous pieces of the highest merit, as well as practical hints and rules to be followed by all in the study of Elocution, as regards articulation, modulation, emphasis and delivery.

EVERY-DAY ERRORS OF SPEECH, by Dr. L. P. Meredith, has just been published by Messrs. J. B. Lippincott & Co.

MESSRS. IVISON, BLAKEMAN, TAYLOR & CO. have published "A General Index to the contents of fourteen popular treatises on Natural Philosophy, for the use of Students, Teachers and Artizans." The work shows much study by the "Massachusetts Teacher" who arranged it.

LIVY, with an interlinear translation, by I. W. Bieber, will be grateful to undergraduates, who are already indebted for similar favors to Mr. Desilver, the publisher.

MR. STANLEY'S BOOK, "How I found Livingston," will soon be ready.

AMONG the recent publications of Messrs. HARPER & BROTHERS we have "California: a book for travelers and settlers," by Charles Nordhoff. It is finely illustrated with maps and engravings.—Another of the "Household Edition" of the works of Charles Dickens—"David Copperfield"—well illustrated.—"The Eustace Diamonds," by Anthony Trollope.—"Little-Folk Life" by Gail Hamilton.—"Song Life for Sunday Schools," by Philip Phillips.—"The Adventures of a Broronie, as told to my child," by the author of "Jchn Halifax, Gentleman," illustrated.

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PROF. DEVOLSON WOOD's Treatise on the Construction of Bridges and Roofs, designed as a Text-book, is nearly ready and will be published next month. A new edition of his "Resistance of Materials" is in preparation.

PROF. A. S. PACKARD is writing a "History of Bowdoin College," with which institution he has been connected sixty years.

A MANUAL OF AMERICAN IDEAS is the title of a work by Caspar T. Hopkins, published in San Francisco.

DEXTER SMITH'S new volume on "The Songs and Song Writers of America" is nearly ready.

PROF. TYNDALL, the eminent English scientist, and Prof. J. H. Pepper, author of "The Boy's Play Book of Science," have arrived in this country.

THE ALBUM OF AMERICAN INVENTION is the title of a work intended for the forthcoming Vienna International Exhibition.

THE Pennsylvania Historical Society is just about issuing the "Correspondence between William Penn and James Logan," vol. 2, running from 1700 to 1750.

F. C. BURNAND has produced a burlesque on the classical "History of the Adventures of Sanford and Merton," which is said to be very humorous in its text and comic in illustration.

## MISCELLANEA.

AS a proof that education is, even in Russia, on the way to progress, statistics have been forwarded us showing that in the province of Moscow at least one child in ten now enjoys the benefits of an elementary education. It should be remembered that the proportion in highly educated countries is one in six.

THE University of Vermont, which opened its doors to women a little more than a year ago, has now eight female students, two in the Sophomore, and six in the Freshman class.

DON.—In the middle ages the professors of the University of Oxford were called "Dominus," or "Don." In the case of the learned professor whose name is known to scholars as "Duns Scotus," the title was of course conferred, and the opprobrious name, "dunce," came into use somewhere on the *lucus a non lucendo* principle. Hence the common term "dunce."

ENGLISH noblemen still cherish the conviction that Americans are a race of savages. One of them, on being introduced to Clara Louise Kellogg, innocently queried, "Do you speak English?"

## PUBLISHERS' DEPARTMENT.

THE Contents for this Volume of the AMERICAN EDUCATIONAL MONTHLY will be mailed to subscribers when applied for.

OMAHA.—The Board of Education of Omaha, Neb., has recently adopted and introduced into the public schools of that city, McGuffey's Reader and Speller, the Molelio Geographies, White's Arithmetics, Harvey's Grammar, and Venable's U. S. History.

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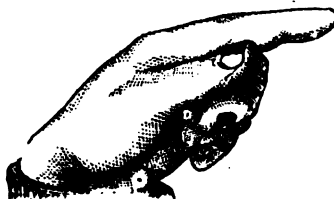
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V. THE SQUIRREL FAMILY [*Gnawers*] is represented, in the large picture, by the *Black Squirrel*; and in the smaller ones by the Gray Squirrel; Fox Squirrel; Red Squirrel; Flying Squirrel; Striped Squirrel, or Chipmunk; California Ground Squirrel; Striped, or Leopard Gopher; Gray Gopher; Tuft-Eared Squirrel; Prairie Dog; Wood-Chuck; Marmot.

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I. SHAPES OF ROOTS. This group contains colored representations of the following shaped roots: *Conical Root*, represented by a Carrot; *Spindle-shaped Root*, by a Radish; *Turnip-shaped Root*, by a Turnip; *Branching Roots*, by the roots of a Tree; *Fibrous Roots*, by Grass Roots; *Tuberous Roots*, by roots of a Dahlia; *Tubers*, by Potatoes; *Bundled Roots*; *Runners*, by the Strawberry Plant; *Bulb*, by an Onion; *Corm, or Solid Bulb*, by a Crocus; *Root Stock*, by Iris, or Flag Root.

II. SHAPES OF LEAVES. This group contains the following leaves and shapes: *Needle-shaped*, represented by Pine leaves; *Sword-shaped*, by Grass and Iris leaves; *Lance-shaped*, by a Peach leaf; *Arrow-shaped*, by a Calla leaf; *Spear-shaped*, by Bindweed; *Shield-shaped*, by Nasturtion; *Wedge-shaped*, by the Cockspur Thorn; *Hand-shaped*, by the Sweet Gum; *Heart-shaped*, by the Morning Glory; *Kidney-shaped*, by Wild Ginger; *Ear-shaped*, by a Magnolia Leaf; *Egg-shaped*, by a Rose leaf.

III. SHAPES OF LEAVES. This group contains the following leaves and shapes: *Lyre-shaped*, represented by a Radish leaf; *Foot-shaped* (bird's), by a Passion Flower leaf; *Feather-shaped*, by Locust leaves; *Oval-shaped*, by a Magnolia; *Orbicular*, by the Cowslip; *Oblong*, by the Rose Bay; *Bundled Leaves*, by Larch; *Perforated Leaf*, by the Honeysuckle; *Whorled Leaves*, by the Red Lily; *Round-lobed Leaf*, by the White Oak; *Sharp-lobed Leaf*, by the Red Oak; *Deeply-cut Leaves*, by the Monk's Hood.

IV. SHAPES OF FLOWERS. This group contains illustrations of the common shapes of flowers, as follows: *Bell-shaped*, represented by a colored picture of a Harebell; *Trumpet-shaped*, by the Honeysuckle; *Helmet-shaped*, by the Monk's Hood; *Salver-shaped*, by the Tobacco blossom; *Funnel-shaped*, by the

Morning Glory; *Cross-shaped*, by the Mustard blossom; *Lip-shaped*, by the Sage blossom; *Butterfly-shaped*, by the Sweet Pea; *Strap-shaped*, by the Aster; *Wheel-shaped*, by the Potato blossom; *Pink-shaped*, by the Pink; *Lily-shaped*, by the Lily.

V. LILY FAMILY. In this group are included the following: A large picture of the *Superb Lily*, representing the principal parts of the flower enlarged. The smaller pictures illustrate the following varieties in blossom: *Tiger Lily*, *Yellow Lily*, *White Lily*, *Japan Lily*, *Philadelphia Lily*, *Lily of the Valley*, *Crown Imperial*, *Tulip*, *Star of Bethlehem*, *Hyacinth*, *Water Lily*, *Victoria Regia*.

VI. PINK FAMILY. In this group a large picture represents the prominent characteristics of this family of flowers. The smaller pictures illustrate the *China Pink*, *Carnation*, *Sweet William*, *Bouncing Bet*, *Scarlet Lychnis*, *Rugged Robin*, *Garden Catchfly*, *Royal Catchfly*, *Virginia Catchfly*, *Mullein Pink*, *Chickweed*, *Spurry*.

VII. ROSE FAMILY. In this group a large picture represents the distinguishing features of the family. The smaller pictures illustrate the varieties of useful members belonging to this extensive family, as follows: *French Rose*, *Wild Rose*, *Sweet Brier*, *Peach Blossom*, *Plum Blossom*, *Cherry Blossom*, *Quince Blossom*, *Pear Blossom*, *Apple Blossom*, *Strawberry*, *Blackberry*, *Black Raspberry*.

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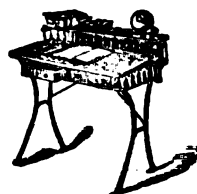
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